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THE PRESENT STATUS OF ORTHOPEDIC SURGERY.*

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The spring of 1876 was the first time I read before this association a paper on "Orthopedics." That was many years ago. The subject of the paper was "Torticollis." On the following year I presented a paper on "Pseudo-Hypertrophic Paralysis," being one of the earliest papers published on that subject in this country. It was commented on by Hammond in his text-book issued about that time. In the following twelve months Pott's disease received attention. From time to time since then I have been in touch with the association, presenting it with occasional thoughts on Orthopedic subjects.

As, on the one hand, I peruse those early papers, and on the other, note where we stand to-day on the same and kindred topics, I realize what advanced strides have been taken in this department; while commendable advance has been made in all depart-

ments of medicine and surgery, yet in none more so than in this. Views on pathology and on methods of treatment have undergone radical changes, and, too, the scope of this department has been greatly enlarged. It was limited, in my student days, to the consideration of certain congenital deformities, like club-foot; and acquired deformities, such as bow-legs and other sequences of rickets; and to lateral curvature and wry-neck. But the progressive American mind soon said, why stop with these deformities? If a local tuberculosis, or, as it used to be called, scrofula, or struma, causes a hump-back or a lame leg, it too should be treated, for the prevention is more than the cure. So, thanks to Dr. Sayre, (who, by the way, occupied the first chair of orthopedic surgery in this country, and, unless I am misinformed, the present essayist filled the second) all tuberculous joints were included in this specialty, because, unless arrested, they became deform-

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ing. Coming down a few years later, the question was asked, why limit our studies and practice to the tuberculous articulations? So another large field was opened in the consideration of other chronic articular diseases, of which there were many. But, if diseased joints were to be included in orthopedics, why not then articulations impaired from any cause, as from dislocation, whether congenital or acquired? And, also, minor affections in the neighborhood of joints, as of bursitis, ganglion, etc.? As articular troubles of the lower extremities caused lameness, then it was a short step to include limping, howsoever induced, as of coxa vara, or paralysis, thus opening up an additional large field. Club-foot had always been relegated to this department; but why not all subcutaneous affections of the feet, such as a broken down lateral arch, producing flat-foot, or an anterior transverse arch, metatarsalgia, hallux valgus, over-riding, hammer toes, etc.?

Seventeen years ago, when the American Orthopedic Association was organized, I, as a charter member, urged that our specialty should be defined, its scope indicated and its limits fixed. But the eastern men fought shy of the proposition, would not be committed. Perhaps in casting their horoscope of the future of this department, they saw rich, but as yet uncultivated fields of research, and thus cared not to be cribbed. Impaired locomotion from any cause was ours to consider. Thus the paralyzes claimed attention, and the neurological domain was invaded, and the end is not yet. In the early day our

armamentarium consisted of splints, and a great amount of commendable ingenuity was displayed in their manufacture. Not many years since a colleague in all seriousness dubbed me a "splint doctor," and he was right, but I was more than that.

The tendo achilles was early recognized as the hindrance to the correction of club-foot. It was natural therefore that the orthopedist essayed to divide it. So he cut down upon it from without, but the few cases doing badly, the operation fell into desuetude, until Stromeyer in 1831 conceived the idea of dividing it under the skin. This being put into practice, subcutaneous surgery took birth, a great boon, and thus a new era was opened to orthopedic surgery. Mr. Little, an English surgeon, himself a sufferer from talipes, visited and was successfully operated upon, by the German surgeon. Mr. Little introduced the procedure to his own countrymen and became the father of English orthopedic surgery. Twenty-two years ago, armed with a kind letter of introduction from my teacher, Frank H. Hamilton, of New York. I was cordially received and entertained by Mr. Little at his cosy home near Hyde Park, London. He was a typical, genial country gentleman of the old school. The memory of that visit remains a green oasis in my life, and it gave new zest to my orthopedic studies.

For many years subcutaneous tenotomy was the only operation essayed by the orthopedist. But our department was not slow in profiting by the advances and discoveries being made in modern general surgery. Anesthesia, antiseptics, surgical cleanliness

were all appropriated, so that to-day one-third of our cases at least come under the knife's sway. Even the knee, the largest joint in the body, is opened with impunity, though sharing as it does, the danger equally with the peritoneum, of infection.

As a recognized specialty, our department has been of slow growth. Twenty-three years ago, when I renounced general practice, nine-tenths of the profession were ignorant of the meaning of the term "orthopedies," so much so that in order not to be misunderstood as to what my department included, I styled it, "Deformities and Chronic Joint Diseases." Now, happily, even the public are beginning to understand the meaning of the term.

Another cause for its slow growth as a paying specialty is the opportunity it affords for rampant quackery. No other department is so capable of appealing to a gullible public through pictorial illustrations as this. 'Tis said the most beautiful example of the limner's art is found in the representation of the perfected human form, but distort this, as is found in congenital and acquired deformities, and sympathy is at once aroused, though the object may be repellant. Advantage is taken of this by the advertising quacks. Their circulars are picture-galleries of deformed humanity, and of "crooked things made straight;" the "before and after." The positive promise of cure; the lying testimonials; the securing large payments in advance; the show of machinery and of polished apparatus; the subsidizing of country newspapers; the traveling drummers and individual correspondence pushed re-

lentlessly, all help to draw the innocent sufferer into the nets of these unprincipled charlatans.

In many cases this could have been prevented had the family physician, who was duly consulted, been fully aware of the ignorance and baseness of the human vampires whose finished work often finds visible expression in the so-called surgical and orthopedic institutes, and equally bad cult osteopathy.

Naturally, parents want their children well, and when stricken with disease, call the physician to aid in their recovery; but for them to realize that a child is to go through life maimed, crippled, deformed, it so appeals to their sympathy and love that no sacrifice is too great in the effort to cure and relieve. So they become an easy prey to the advertising charlatan who promises cure and restoration of form and function. And especially is the determination of the parent to effect a cure great, if he believes that he may be responsible, directly or remotely, for the congenital physical deformity or incapacity of his offspring.

There flourish to-day in many of our western cities so-called surgical and orthopedic institutes, advertising the cure of, and essaying the impossible in the treatment of disease and deformity. The eastern cities were once afflicted with these vampires, preying on human credulity, but as their ignorance and questionable methods and failures became known to the profession at large, and to an educated public, their patronage ceased and they removed to pastures new and unharvested. So will it be at the west; their days will be limited, when

the profession and public know on the one hand of the quackish methods and incompetency of these charlatans, and on the other that there are educated physicians of the regular profession who honestly and conscientiously treat this class of cases.

The greatest accession of late made to orthopedic surgery has been the utilization of the x-ray, especially in diagnosis—more so probably in this than in any other department. Shadowgraphy finds expression in the condition of the densest of organic structures, namely, the bones, and in their relations to one another; so, being familiar with the normal appearance, we are able to determine the abnormal as to density, size and internal structural change. The tubercular joint early gives evidence of bone atrophy, and the diminished shadow indicates a lessening of the lime salts, and the focus of disease appears as a thin walled cavity. Later, irritation of the joint stimulates epiphyseal growth, which enlargement will be noted on the plate. Destruction of bone is indicated by diminished shadow and indistinct outlines. A differential diagnosis can be made between this tuberculous process and osteomyelitis. The latter does not involve the joint, at least in the early stage; there is no atrophy of the shaft, on the contrary, there is a thickening of the bone cortex, a cavity, and positive localization. Other forms of osteomyelitis throw characteristic shadows which could not well be confounded with local tuberculosis.*

The x-ray has been of great practical value in clearing up the pathology

*Robert S. Osgood.

of arthritis deformans, as the Germans term it, showing two distinct conditions, so that the explanatory terms, atrophic and hypertrophic arthritis, will hereafter be used, in lieu even of osteo-arthritis and rheumatoid arthritis. No longer can the sweeping term chronic rheumatism, be applied to these deforming, slowly progressing arthritic troubles, heretofore a cloak for ignorance. No longer will the old Texas doctor tell us that his remedy for cases of chronic rheumatism is to "take them out on the plains and shoot them."

The relation of the fragments in fractures and of the involved bones in dislocations, is now removed from the field of guesswork. Improved therapeutics and better results will accompany the positive diagnosis of the x-ray. It is often a satisfaction to have positively verified conclusions already arrived at by manipulation. I would have attempted reduction in two cases of double congenital hip dislocation had not the skiagraphic pictures in the one case demonstrated new formed joints on the dorsum ilii, and in the other, fragile femoral necks only wanting slight force to break them. Thus I was saved from disappointing failure and serious complications.

A little fellow with hip disease, several months recumbent on the stretcher-splint, with traction, was doing finely. So I allowed him to be taken to his father, a physician in the Indian Territory. Two months later he wrote, "Boy so well and active, and limb in such perfect position, must be gotten up." I reluctantly consented, even against my better judgment, and I sent down a Thomas

splint, with high shoe and crutches. At the end of another two months word came, "Limb much shortened, foot everted, hip painful, severe night cries, disinclined to move." I telegraphed, "Bring him at once." What had happened to again light up the disease? What was the condition of the parts? Let us hear the story of the skiagraph: Destruction of the upper part of the acetabulum, with dislocation on the dorsum ilii of the head. We had always suspected disease of the acetabulum rather than of head and neck of femur, because the pain had been located in the hip rather than at the knee. The lesson taught was, keep your cases well in your own hands, trusting no one else. The boy was again put back on his stretcher with elastic traction. The hip duly came down, and will be so held for ankylosis, but in good length and position. The patient was gotten up too soon, and had carelessly been allowed to bear weight on the limb, and thus recovery was put back many months. But it proves the value of the information conveyed by the x-ray.

Every week we are having illustration of the practical value of the Roentgen ray. The machine has become part of the furniture of every surgeon's office. But to be of practical benefit in the recognition of disease, or abnormal conditions, the operator must know the normal.

I have proposed to our instructor in osteology at the college to have a cabinet of skiagraphic pictures of the various bones and joints, of the extremities and of different ages, for study and for the instruction of the student.

We should speak of the novel ex-

pedients employed to relieve the subjects of paralysis in the surgical procedures of tendon transplantation and nerve grafting. Up to the present time we have had but two suggestions for these helpless ones, viz.: (1) arthrodesis, or the production of true ankylosis, especially where the joint was flail like—mostly in the ankle; and (2) the use of complicated braces, hugging the limb closely, and fitted with lock and stop joints, and frequently with the additional employment of crutches. The use of brace and crutches was a temporary makeshift. The arthrodesis in connection with this switching of the power of a normal muscle to the tendon of a paralyzed one; this conversion of a flexor into an extensor, or of an abductor into an evolver was a marvelous idea, and, happily, has found practical application. The operator should be well up in his anatomy, have correct ideas as to the force and power of the muscles and direction of their pull, and of their tension, and the thoroughness of the attachment; the immobilization of the part until union is complete, and, later, the active and passive movements. The operation should previously have been well mapped out and perfected in every detail. While there has been much of disappointment, yet brilliant results have not infrequently been attained, and the lame made to walk, and the palsied hand to raise.

The more wonderful procedure of nerve-grafting, or transference of nerve power, while quite possible, yet finds less frequent application. In favorable and selected cases it will in the future come into general use, thus opening a fertile field.

For the straightening of knock-kneed limbs, subcutaneous osteotomy is safe and efficient; in the opposite deformity of bow-legs, osteoclasis, or the mechanically breaking of bone, is now all that can be desired.

Pott's Disease.—Twenty-five years ago I put myself on record as saying that hunchbacks would be as rare in the community in time to come, because of improved treatment, as pock-marked visages were nowadays to what they were sixty years ago; and it has proved to be true, and while we may not break and straighten an old spinal boss, yet we may, by early and supporting treatment, prevent deformity on the one hand and diminish it on the other. Recumbency is the keynote in the therapeutics of tuberculous spondylitis. This removes the superincumbent weight, and in conjunction with a brace or jacket, best made of celluloid, to immobilize the vertebrae, arrests the disease and prevents deformity.

Congenital Dislocation of the Hip.—At the Pertle Springs meeting of this Association, held in 1892, a little girl was brought in for diagnosis. She had always been lame, and there existed extreme lordosis. Opinion of spinal trouble had been given. I was able readily to demonstrate the case as one of double congenital hip dislocation; and later it fell into my hands for treatment. Following the example of Dr. Buckminster Brown, of Boston, who had then recently reported a case successfully treated by long continued traction, I put her on the back, with five to eight pounds to each limb. How faithfully for many, many months, we kept up a constant pull on the hips, and when finally she

was gotten up, we were careful to throw the weight on the tuber ischii, and not on the hips. It was the opinion of counsel that we had succeeded in reduction; perhaps we had. But a doubting grandmother, with whom she was visiting, removed the brace, thus allowing unrestricted weight and motion. So the heads slipped out, if really they had been in. The child was greatly improved but not cured. I now realize that the femoral head was on the edge of the acetabulum for months, waiting only for slight abduction and rotation to lift it into its socket. But oh! place me back again with my x-ray and present knowledge and experience, then would be given a positive assurance of cure. Such have been the advances made in our knowledge of the anatomy and of the treatment of congenital hip dislocations, that cases under five or six years of age are hopeful of cure. I believe in the Lorenz method of manipulation, but prefer to lessen the resistance of the contracted muscles, so far as may be by previous traction and by tenotomy of the adductors. If simple manipulation is unsuccessful, there remains the operation of opening the joint and splitting the capsular ligament, that it may not get caught between the head and the acetabulum, and that under sight the head may be replaced.

While in the past correct anatomic replacement was quite exceptional hereafter it will become the rule. What an advance!

Fragilitas Ossium.—We have a valuable contribution to the subject of "Fragilitas Ossium," by Dr. Nathan, of New York, in which the ground is taken that all cases coming under this

heading are congenital, only they have not been recognized at birth. Fetuses, with multiple fractures had been observed and studied, and the name of osteogenesis imperfecta given to the disease causing the same. But it had been supposed that extra-uterine existence was not possible with these cases. So there have been considered by writers on multiple fractures two classes of cases, one antenatal, and the other observed during childhood and youth. I believe Dr. Nathan is correct in considering them both one and the same. There are different degrees of intensity of this disease. When extreme and attended with many intra-uterine fractures, still-birth is the rule; but when less severe, the infant is born viable, and with care, lives. The liability is there, but during infantile life is so tenderly cared for that traumatisms are avoided, until the infant is put on his feet. Then the attendant falls and knocks act as exciting causes, and the fractures occur.

Empyema a Cause of Scoliosis.—

Some of my most extreme cases of lateral curvature of the spine have been caused by collapse of one lung following empyema. The severe and long continued pressure on the lung of the large amount of fluid contained in the pleura, has so condensed the air-vesicles that they are effaced; the opposite lung alone doing the work, the equilibrium of the chest is lost and the spine tilts laterally. Or the lung is compressed by air admitted into the pleural cavity in the operation of tapping or opening the chest. The prevention of this deformity is found in early withdrawal of the fluid, on the one hand, and

withdrawal of fluid without admission of air on the other; and here comes in the responsibility of the general surgeon.

America has taken a decided lead in the department of orthopedic surgery. Eighteen years ago a national association was formed which exists to-day with a large membership, and quarterly transactions published regularly, of such value as to be quoted freely by even foreign writers.

Did time permit, it would be interesting to consider in detail all the different topics coming within the purview of orthopedics. They can, however, be generalized as (1) deformities, both congenital and acquired; (2) chronic joint diseases in both the young and old; and (3) difficulty of locomotion from any cause. The therapeutics being both preventive and curative, may be either mechanical or operative. So, then, we stand to-day as one of the most comprehensive and progressive of the specialties.

DISCUSSION.

Dr. J. F. Binnie, Kansas City: It is a hard matter to follow Dr. Steele in a paper covering so wide and extended a territory. As to the width of territory occupied by orthopedics, as set forth by Dr. Steele, when he told us that if spinal curvature was due to tuberculosis (which it was), therefore orthopedics included the original disease and the prevention of the deformity, it reminded me of our friends the gynecologists, who invented the speculum for the examination of the cervix. But they did not limit it to this; they said, man is born of woman, and therefore they decided to extend its use until now they operate

on the prostate in the Women's and Children's Hospital. So it is with regard to the scope of orthopedics. There is no specialty in surgery. Each man chooses what he knows best, but there can be no hard and fast lines. Nothing has so advanced as the treatment of club-foot, and nerve suture promises much in the future. I believe before many years are over that nerve transplantation will be a comparatively common operation. It is wonderful how a flexor muscle may become adapted to perform the work of an extensor, and how a nerve, whose normal function is to shrug the shoulder, is educated to reverse the action. The paper emphasizes the importance of early diagnosis, for instance, the importance in early cases of Pott's disease of looking for some obscure indication. I remember in one case I could find no symptom until at last I found a knuckle protruding from the back. After application of a plaster of Paris bandage, the child was able to sleep well for the first time in months, and made an excellent recovery.

Dr. M. M. Edmonson, Kansas City:—There is one feature in the treatment of cases in the orthopedic line that is of interest. It being an acknowledged fact that the majority of joint diseases are due to tubercular disease, then the same conditions that will bring about a cure in pulmonary tuberculosis will aid in these cases. In the Mercy hospital during the past winter, where we treated only orthopedic cases, none of the

cases did so well as during the summer and I am convinced that aside from the protection of the joint we are greatly aided by an outdoor life, just as in pulmonary tuberculosis. There was one case of congenital dislocation of the left hip which was reduced by the Lorenz method. It was put up in plaster of Paris, strongly abducted and flexed. The x-ray showed that the right hip was dislocated although physical examination showed no sign of dislocation. The left hip was brought down on a line with the right, the support was taken off a month ago and passive motion instituted in the left hip and the child now walks almost perfectly.

Dr. Steele, in closing: Two of the pictures I present show congenital dislocation of the hip reduced. The single one was reduced about a year ago, and to-day the child is running about perfectly well. The other was a case of double dislocation which Lorenz refused to operate on. I took the child in hand and permanent anatomic replacement is the result. I am treating the tuberculous joints out of doors, but where there is an inflamed joint it must be kept perfectly quiet. Dr. Binnie, as a general surgeon, is, I suppose, simply jealous of the gynecologist and the orthopedist. But never fear, the field is large enough for all of us. I have not had time to speak of spinal supports. Formerly I made them of leather, but now of celluloid, and find them to be very light and satisfactory.

PERMANENT SEQUELÆ OF INFLUENZA.*

By L. W. DALLAS, M. D., Hunnewell, Mo.

The etiology and symptomatology of influenza are sufficiently well known to require no description. The treatment, however, is most important and unfortunately is described, more or less accurately, by the word polytherapy.

Of all overtreated diseases with which we are occupied—and there are many—influenza is a sure winner. Yet many times it is not treated at all, leaving the toxins of the disease to lay the foundation for many serious troubles in after life.

The laity many times ignore the milder cases which call for skilled treatment, and frequently the home treatment, or lack of treatment, proves the undoing of the patient. It is also a notable fact that some of these milder cases leave a train of evil consequences which render the patient a more or less complete physical wreck for the remainder of his life, and his days thereby shortened.

It is a common experience with the average practitioner to find many persons dying from other diseases, who date their first ill-health from an attack of influenza.

I propose to discuss briefly the more common complications and sequelæ of this disease in the hope of calling attention to its great importance.

The majority of the disastrous after-effects of this disease, which I shall enumerate, have been observed in a general practice of some fourteen

years' duration. The remainder have been gleaned from various text-books and medical journals. No attempt will be made to discuss the pathology of these sequelæ in detail; it will be assumed that nearly all—if not all—of the after-effects of influenza are caused by degenerative changes, which result from the toxins produced by the bacillus of Pfeiffer. It will be well to remember that some of the most dire consequences may be caused by mixed infections, in which the grip bacillus plays a leading and, in some cases, a subordinate part.

One of the most serious sequels of grip is its effect upon the respiratory mucous membrane. Many catarrhal troubles of a permanent character are caused by this disease. Starting with the nose, there is no mucous cavity or surface which it may not invade and there locate to stay. Chronic rhinitis, pharyngitis, laryngitis and bronchitis are noted.

Tuberculosis is a frequent follower of grip where there is a predisposition to that disease. Abscess of the lung has been noted with various complications. Pleurisy followed by empyæmia, thickening and agglutination of pleural surfaces, thereby permanently crippling the lung, is a recent experience.

The circulatory system is a special sufferer. Tachycardia, bradycardia, angina pectoris are occasionally seen. Cardiac dilatation is more frequent, but the most frequent and pronounced, is a general cardiac weakness, which produces, in very many cases, profound prostration of all the powers and

*Read at the annual meeting of the Missouri State Medical Association, Excelsior Springs, May, 1905.

forces of vital organs. This leads to many serious difficulties of the circulatory system, which are too apparent to need mention in a paper of this kind.

Rarely nephritis is a sequel of grip and lasts the remainder of the hapless patient's life. More frequently cystitis of a catarrhal character is seen, requiring good management to prevent its becoming chronic.

The nervous system is a frequent sufferer from grip and may result from cardiac asthenia, as noted above.

Insomnia, general neuralgia, migraine, melancholia, mania, myelitis and meningitis have all been observed. Vertigo of nervous origin I have noted in three cases.

The organs of special sense suffer by reason of degenerative changes in the nerves of special sense.

One writer has noted a case of blindness caused by optic neuritis following grip. Paresis of the optic nerve seems to produce the more common eye troubles. Permanent deafness may be caused by suppurative processes in the middle ear, as well as by paresis of the auditory nerves.

In some cases vaso-motor disturbances, causing profuse sweats, persisted for months, bringing about neurasthenia of a severe type.

I have recently seen a case of brachial neuritis, which was very likely caused by influenza, and which has persisted for the past year. I now have a case of hemiplegia under observation which has been seriously aggravated by grip. I saw a case of partial aphasia and mental aberration in an old man who, during his sickness, became maniacal and wandered from his home. Mental despondency

has been observed by myself and reported by others.

Gastrointestinal effects are frequently seen, and may be in the form of gastric catarrh, lack of motor power and general weakness of digestive function. The intestinal after effects are more often catarrh and lack of motor power, thereby producing constipation of a permanent character. Chronic appendicitis has been caused by the bacillus of Pfeiffer.

Degenerative changes in the uterus frequently produce abortion, and sometimes establish an abortion habit.

DISCUSSION.

Dr. J. M. Allen, of Liberty: There has not been, and there will not be, a paper read of greater importance to the medical profession in their relations to treatment of disease than the one read by Dr. L. W. Dallas on the sequelæ of la grippe. The doctor has correctly selected that element which is of the greatest importance in the disease under consideration. La grippe of itself, except when complicated with other diseases, is simple, and we have remedies that relieve it in a very short time. The sequelæ, however, are often very grave and dangerous conditions. That these sequelæ are the result of toxins affecting some one organ of the body there can be no question. In this selection there is no fixed law. Hence I believe that the selection is governed by the peculiarity of the individual. Therefore, any of the organs of the body are liable to be involved.

In an analysis of a large number of cases of sequelæ of grip seen at my clinic in the University Medical College, Kansas City, Missouri, I find that

the organs affected are in the following order of frequency: Heart, lungs, kidneys, nerve centers, muscular system and liver. The liver affections are largely confined to its ducts. When the lungs are involved in the primary attack the inflammation most frequently begins with the pleura and extends in the connective tissue of the lung, rarely involving the mucous membrane of the bronchioles and air cells. Hence the classic symptom of pneumonia (rusty colored sputum) is absent. Also, in many cases, there is no bronchial breathing for the same pathological reason. In many cases the inflammatory process advances steadily, not unlike an erysipelas of the skin.

From observations drawn from my private practice and my clinic at the University Medical College, where I examine three thousand to four thousand cases annually, excepting the cases of la grippe uncomplicated in the primary attack, it runs its course from seven to twelve days, and, if properly treated, sequelæ are rare. If, during this period, the patient does not stay in doors and exposes himself to the vicissitudes of the weather, sequelæ are very frequent. My clinic in the University Medical College is a so-called out-door clinic, composed of the indigent and poor of the city, who are compelled to go to work as soon as they can walk. Hence the large percentage of sequelæ of grip in our cities. It is not near so large in the country. I am sure I do not say too much when I say that 75 per cent. of all the cases I have seen of phthisis, disease of the heart, kidneys, lungs and nerve centers, in the last ten years, could be easily

traced as a result of grip due to exposure.

Dr. L. J. Dandurant, of St. Joseph:—I think appendicitis is attributed to grip, because we do not know what else to attribute it to. It is true we do have a great many more cases diagnosed and operated upon now than formerly, and as la grippe made its appearance just about the time that the average physician was beginning to recognize appendicitis, some surgeons are disposed to lay the whole responsibility upon this disease. I recently read some very interesting statistics showing that since appendicitis has been diagnosed by the average physician the different diseases of the abdomen, especially those attributed to the liver and stomach have decreased in proportion to the increase in the number of cases of appendicitis. While I do not mean to say that la grippe is never a cause of appendicitis, I am inclined to believe that the great increase in the number of cases is due to the correct diagnoses, and not to the recent epidemic of la grippe.

Dr. T. E. Potter, of St. Joseph: Chronic appendicitis having been referred to as one of the things that come about as the result of this trouble, I would say that I am convinced that a large number of the acute cases of appendicitis are the result of influenza. I myself practiced medicine for sixteen years, and in that time I had only one case of appendicitis, the result of an enterolith. Since the epidemic of grip, fourteen years ago, we have had nothing but appendicitis. We have had it all over the country, and the countries that have suffered the most from influenza

have had the most patients suffering from appendicitis. Take Moscow, for example, where the cases of influenza were so numerous, and where so many cases of appendicitis have been reported. We have had this winter many cases of the so-called winter cholera, and this little appendix is a favorable element for the cultivation of these little germs. We find that influenza appears in the history of 90 per cent. of the cases of appendicitis we have to deal with. Since this epidemic of fourteen years ago, we have found many more cases coming up the summer following a winter in which there has been an unusually large number of cases of grip.

Dr. Roland Hill, of St. Louis: I think the wide and diverse influence of the grip bacillus has not been fully appreciated. Some three years ago I reported a case of grip peritonitis, and I think I can prove to the satisfaction of the meeting, that it was grip peritonitis. The patient, a young woman of twenty-eight, was taken with a severe headache on Wednesday, with a slight cough and a slight rise in temperature. Thursday the conditions were aggravated. On Friday the headache was much more intense. There was no vomiting, no tympanites, and the temperature was 102° or 103°. Saturday night the woman began to have some pain in the abdomen. Sunday afternoon this pain became more severe, and Sunday night it increased as rapidly as if she had a perforating gunshot wound. The distention was great; temperature ran to 106°; pulse, 160; and on Tuesday morning she died. I made a post-mortem with Dr. Carl Fisch, and found a general peritonitis. Cult-

ures were taken at the time from the secretions and from the spleen. On examination, these were found loaded with grip bacilli. As this was the only organism present, we felt justified in ascribing the peritonitis to its influence. Similar cases have been reported by German and one or two other foreign observers.

Dr. L. J. Jones, of Linden: Twenty-five or thirty years ago, we treated all cases of appendicitis as typhoid fever or general peritonitis. Probably the better diagnosticians of to-day can differentiate between the different abdominal diseases, and this is the reason of our better success in their treatment.

Dr. J. A. Larrabee, of Barnard: I think there is hardly any room for disagreement on the subject. We can agree with the main part of what has been said. The essayist called attention to the fact that the grip bacillus caused these diseases. The first speaker in the discussion said they were caused by the toxins, that selected the point of least resistance to invade the system, and it has been shown that we might have appendicitis and peritonitis as a result. All of us know that, twenty-five or thirty years ago, we diagnosed our cases as typhilitis or perityphilitis, and never thought of operation at all. The disease is much more frequently diagnosed than before. We all know that we have gastro-enteritis in connection with grip, and it seems very plausible that anything that would produce an inflammation in the stomach and intestines, would have an influence in causing appendicitis.

Mr. Dallas, in closing: I would emphasize again, that all people with

influenza should be treated at once, and given tonics for awhile after they are convalescent. The disease should be treated physiologically, as diphtheria is treated. I wish the bacteri-

ologists would pay less attention to snake-bite remedies—because everybody knows that the present remedy is entirely satisfactory—and pay more attention to the treatment of grip.

NEWER METHODS OF BLOOD EXAMINATION, FOR TYPHOID, WITH DEMONSTRATION.*

BY B. M. SHOEMAKER, M. D., St. Louis.

(In the absence of Dr. Shoemaker, Dr. G. C. Crandall presented the subject.)

There have been developed within the last few years several methods of blood examination for typhoid fever without the use of the microscope. These are sometimes referred to as the macroscopic. Widal reaction. It is spoken of as the Ficker test, and consists of obtaining agglutination with a dead culture of typhoid bacilli. He prepares a twenty-four-hour culture, kills it by adding 1 per cent. of formalin, and uses this with the diluted suspected blood serum. If the blood is from a case of typhoid the mixture will produce agglutination of the dead bacilli suspended in the solution, and there will be a slight flocculent precipitate similar in appearance to a slight precipitate of albumen. This test has been used by Ficker and others for a considerable time with quite satisfactory results, and is especially valuable for one who wishes to make a test with a preparation which he can easily keep in stock. This method has been modified to some extent by Ruediger of Chicago, who adds the blood to a formalin so-

lution before mixing with the dead culture. Borden of New York has made another modification, using an agar culture, from which he washes the bacilli with a saline solution. This does away with some of the albuminoid precipitate of the bouillon culture.

I have found the Ficker test and its modifications quite reliable, having frequently checked the results by tests which I have had the city bacteriologist make of the same blood.

Another modification is that of Von Theiling. Instead of taking the blood in a tube he uses a piece of blotting paper, dissolving the blood off the blotting paper, which is said to be quite accurate. The macroscopic method in its various modifications has been used in both Europe and this country to a considerable extent with quite favorable reports. It appears almost, if not quite, as accurate as the microscopic method, and for the physician in the country it is a valuable aid in diagnoses. I have a dead culture which I have kept for nine months, and it still gives a good reaction. Ruediger obtained a distinct reaction with blood which he had in the laboratory for a year. It is a test which should be used in the country

*Read before the St. Louis Medical Society, May 27, 1905.

much more than it now is, and I believe will be found quite easy of application.

I have for demonstration some tubes of the Ficker, Ruediger, and von Theiling tests.

EXAMINATION OF BLOOD FOR MALARIA, WITH DEMONSTRATIONS.*

BY G. C. CRANDALL, M. D., St. Louis.

Standing in close relation to the typhoid reaction, is the examination of the blood for malaria, especially in malarial districts like our own. Frequent mistakes have been made in the diagnosis of continued fevers, but the improved clinical methods are lessening these errors. The presence of typhoid and malaria, associated in the same individual, is not common, but has been occasionally demonstrated. We know a patient may have typhoid, and at the same time have in his blood the malarial organisms, which latter usually subside somewhat in the presence of the typhoid; and as the typhoid improves, the malaria becomes manifest again. In the City Hospital I have found two such cases, and as the typhoid recovered the malaria reappeared, until controlled by quinine. This might be called true typhoid malaria fever. Is it possible to diagnose malaria clinically? Yes and no. Typical cases of malaria can usually be diagnosed clinically, but many of the cases are atypical.

Is quinine administration a reliable test? If you give quinine to a patient, and he improves, it has been said by some that this is strong evidence that the individual has malaria, but I believe it is not a satisfactory

test. Quinine may be used for many slight troubles, and the patient improves. Children, especially, respond readily to quinine. Quinine is not a positive test. It may, however, be a negative test. For example, if you have a continued fever of considerable virulence, and you have given quinine freely for several days or a week, and the patient does not respond, you can be quite certain that the case is not malaria, or that there is some other condition associated with it. How can we make a positive diagnosis of malaria? Only by finding the organisms in the blood or tissues. Finding the pigment of the malaria organisms in the blood is also evidence, but we have other pigments (the hematogenous pigments and others), and the appearance of the white corpuscles sometimes simulate pigments, which makes this test very confusing and unreliable.

If we have a thin film—many are too thick—and stained with a reliable stain, as a good methylene blue eosin, the organisms will show plainly, as a rule. If the organisms are very few, Röss, of England, has discovered a method of finding them. Take a thick drop of blood upon a slide and dry. Allow water to flow over it carefully, standing until it dissolves out the hemoglobin; pour off, and again dry thoroughly, then stain as a

*Read before the St. Louis Medical Society, May 27, 1905.

film. The red cells do not stain, but the leucocytes and the organisms are quite easily found. The pigment of the organisms stands out very clearly. This is a very useful method where the organisms are scarce. This method of staining blood may be of value, also, in demonstrating bacilli in the blood.

I have under the microscope, specimens showing the various forms of malaria.

DISCUSSION.

Dr. Gradwohl said the Widal reaction was not an absolute means of diagnosis and must be considered only as a laboratory accessory, by performing it in an exact manner, and it could only be performed in an exact manner by only an exact dilution. It was as impossible to make an exact dilution by the color index as it would be to make a leucocyte count by observation of the smear. The color index would certainly depend upon the amount of hemoglobin. If the blood was rich in hemoglobin a greater degree of dilution would be necessary to get the color index, and in the case of blood poor in hemoglobin one would have to make a less dilution. Hence, to put the Widal reaction on a proper basis, it was necessary to use the capillary tube and make an exact dilution. It did not seem possible to maintain the Widal reaction even as a clinical test if the dried blood method came into vogue, for enough mistakes occurred even with the exact method.

Dr. John Young Brown was impressed by Dr. Clopton's emphasis upon the possibility of delaying operative treatment while waiting for a multiple leucocyte count. That was

a point well taken and the time would come when exploratory operations would be the rule. The essayist was right in saying that there was a possibility of delaying immediate operative procedure which might prove dangerous while waiting for the leucocyte count.

Dr. Crandall, in closing, said that in regard to the serum method, compared with dried blood, the former is, of course, most accurate, and this could easily be applied in the macroscopic test by the use of little graduated pipettes. Merck and Mulford put up tests with these pipettes for making the dilution. With so convenient and easily applied a test the blood could be examined daily, as he had done in some cases of typhoid. As regards the Widal test in general, he had a great deal of blood examined since the work was undertaken by the city laboratory under Dr. Ravold, and had found the results very reliable. For taking blood, the ordinary Hagedorn needle answers the purpose very nicely, having a lance-shaped point, which causes the blood to flow easily. Referring to cold baths as a means of diagnosis, he thought that in cases of acute tuberculosis, sepsis, or pernicious malaria, the fever would continue despite the cold baths. In other fevers the cold might have some effect in shortening the period. The use of quinine was very reliable in malaria, but he did not like to give it until he had examined the blood. Before giving quinine he made it a rule to take some blood for examination. There was no question but that two or three days' treatment made it more difficult to find the organisms. In pernicious cases, however, they may

be found for some time after the administration of quinine. He recalled one case, in which the patient at the city hospital had taken sixty grains of quinine daily for a week, and yet it

was very easy to find the organisms of the crescent form by the Ross method, although the patient was improving rapidly.

PRESENTATION OF SPECIMENS. WITH DISCUSSION.*

BY NORVELLE WALLACE SHARPE, M. D., of St. Louis.

I.—POST-MORTEM SPECIMEN: ANEURISM OF THORACIC AORTA.

This specimen is not in my line of work; it was but by accident that I encountered it. It occurred in the person of the husband of a servant of mine. He had complained for many years of "asthmatic attacks." When they became *very* severe he came to see me. He had been treated by various physicians. Beginning with August, 1903, I have notes which read much as follows: "The patient complains of 'shortness of breath.' This asthmatic condition has prevailed for many years. Has pain under the xiphoid; worse at night; radiating down the right shoulder and arm. Radial impulse almost, if not exactly, identical on the two sides. Cardiac area moderately increased. Heart sounds practically normal except in the aortic area. Normal dullness at the origin of the great vessels vaguely increased. No tracheal tug. Nothing palpable nor audible that would warrant a diagnosis of aortic aneurism, and yet I suspect its existence." That was in 1903. I never saw the patient again until this year, when he died in February of a ruptured aneurism of the arch of the aorta, while sleeping. The patient died without waking his wife, pre-

sumably, therefore, without violent struggles, though she later stated that he had acted queerly that afternoon, and she thought that he had been drinking. The aneurism, as you may observe, is in relation with the base of the heart. Through one of the eroded patches the rupture had occurred, and the pericardium was found ballooned with blood. Without any special skill in the differential diagnosis of such affections, what I might call an intuition led me to suspect aneurism, for there were not sufficient symptoms to warrant a definite diagnosis. So far as I know, there was no antecedent history that had any bearing on this case.

II.—GANGRENOUS AND PERFORATED APPENDIX.

The next specimen is an appendix, which of itself is not specially interesting, but the history is. This occurred in the person of a young man of twenty-four years who lived up the state. He had previously enjoyed practically perfect health. He had been sick but three or four days, the present attack beginning with constipation, general malaise and abdominal pain that became localized in the right inguinal region. The temperature reached 105+ degrees. The treatment previous to my call had consisted of

*Presented before the St. Louis Medical Society, June 24, 1905.

narcotics, suppositories, cathartics, rest in bed, limited diet, etc. When I examined him, about 8:30 A. M., he had a temperature of 99.8 degrees, pulse 95, respiration 18. There was a foul breath, dry mouth, red flush surrounding eyes and mouth. There was general abdominal tympany; the patient was *free from pain* (which had been present early that morning), but upon palpation the most sensitive point was still to be found in the appendicular region. Muscular rigidity was *not* well marked, but the right rectus was slightly stiff and abdominal respiratory movements were somewhat restricted. The picture was, in my opinion, that of a beginning and advancing peritonitis, with sepsis, and I advised operation. I was opposed in my judgment by the two physicians in charge. The boy had been very sick, with the classical symptoms of appendicitis. The temperature had dropped to almost normal; he felt very much better, and was practically well in the judgment of his parents, and greatly improved in the judgment of the physicians in charge. I urged operation, and, after considerable debate, they finally agreed. The boy was removed to the hospital and was operated upon at 12 o'clock. The appendix was found posterior to the cæcum, high up, half way to the liver, firmly bound down by adhesions, tightly filled with feces, was gangrenous, and had two perforations. About a cupful of very foul pus was evacuated from a peri appendicular abscess, and the pelvis drained with a wick. The temperature at 8:30 A. M. was 99.8 degrees oral; before going upon the table at 12 M. it was 103.3 degrees oral;

when returned to bed again, it was 101.4 degrees rectal. Reaction was satisfactory, and the patient recovered. The points of interest in this case are that the patient had had a temperature curve running to 105 degrees; when I saw him at 8:30 A. M. it had dropped to practically normal, with respiration of 18 and absence of pain, an *apparent general improvement*—the perforation, gangrene and abscess existing with a general picture of improvement. Another point of interest is the fall of practically two degrees in the temperature from the time he was put upon the table until he was taken off, and the smooth recovery.

III.—OVARIAN CYSTOMA WHICH FOLLOWED DOUBLE SALPINGO-OOPHORECTOMY.

This is a case of an ovarian intraligamentary cyst. This young woman was twenty years years old, when first seen in 1900. She had not been well for about three months and her present sickness was supposed to have been brought on by "lifting a heavy tub." She had previously had certain glands in the neck, probably tubercular, operated upon. My notes at this date abbreviated, are about as follows: "She has had but one menstrual period since her illness. Patient much discouraged, is undoubtedly sick and looks septic. No further history of interest." Operation was recommended with a diagnosis of double pyosalpinx; the uterus was found bound down; on both sides masses were felt involving the tubes; the patient denied infection; urine negative. Both tubes were removed with the ovaries from a mass of very

dense adhesions. The work had to be done with extreme rapidity on account of the patient's exhausted condition. There was nothing of interest in her recovery. From one of these ovaries there was a globular growth the size of a large walnut, upon which Dr. Carl Fisch reported as follows: "An examination of the ovarian tumor handed me some time ago showed an extraordinarily interesting process. It consisted altogether of one large caseous tubercle; giant cells and tubercle bacilli are easily demonstrated. The other tube and ovary did not offer anything demonstrable." My notes under date of May, 1902, are as follows: "Patient claims she has never missed a period since operation. She looks well, and save the fact that she is obliged to cease work during the menstrual period, she is in good shape. During the menses she suffers intensely and feels weak for a day or two afterward. The patient objects to examination." This virgin had one of the smallest vaginas I have ever encountered, and the abdominal wall was, normally, the tensest I have ever seen, a combination which rendered examination difficult. I have made two laparotomies upon her and the union in each instance has been sufficiently good to preserve this unusual though normal rigidity. This year's notes I find to the following effect: May, 1905. "Patient has continued to menstruate regularly since operation, averaging four days, with intense pain on right side, radiating down the thigh and leg. Otherwise steady improvement since operation, her health being excellent. On examination the uterus was found to be two and a half inches

in depth, retroflexion to the left and held down by adhesions. No special tenderness anywhere. On May 10th she was operated upon and I found everywhere numerous dense adhesions. The uterus was enlarged and somewhat friable. Intraligamentary cysts and fragments of friable ovary on the right side were removed, having evidently escaped attention in the dense adhesions at the first operation. The distal and proximal stumps were mattress sutured and ventrofixation of the uterus was made. Schroeder has recently reported three cases of ovarian cystoma. The first, a pseudo-mucous cystoma; its benign nature proved by the microscope, was removed and three and one-half years' later on laparotomy a general peritoneal carcinoma was found. He believed that fragments of the benign tumor were left, which later underwent malignant degeneration. The second was a cyst adenoma of the ovary which he could not remove, and he sewed the wall of the cyst to the abdominal wall and then opened it. A fistula followed which remained patent for several years; gas and fecal matter at times escaped. Another laparotomy was performed and the cyst was again found inoperable. There was an attempt to extirpate the fistula which led to the pelvis with drainage through the vagina. One and a half years' later the fistula closed, but a year later it opened again. Again it closed and seven and a half years after the first operation the vaginal fistula was still secreting and there was a hernia through the abdominal fistula. The tumor showed no signs of malignancy. The third tumor, a dermoid cyst, while obstructing labor, was pushed

upward into the abdominal cavity. It ruptured and the contents gave rise to another tumor. About a year after labor, a tumor the size of the fist was felt to the right above the pelvic brim. Another immovable tumor was felt under the left costal arch. A laparotomy was performed and the pelvic tumor was found to be a dermoid cyst of the right ovary, the upper tumor, fixed to the abdominal wall, was removed with much difficulty. It was made up of fatty sebaceous matter and pervaded by granulation tissue containing numerous giant cells.

This specimen is now in preparation for sectioning. If anything of interest is noted, a report will be made to the society.

IV.—TOTAL EXTIRPATION OF LEFT CARCINOMATOUS BREAST BY THE HALSTED METHOD.

The patient was an unmarried woman, aged seventy-one, an inmate of a Home which was under my charge. There were no definite symptoms. I heard that she had had some trouble with the breast, and with a little persuasion I secured her permission to examine. I found a slight hardness with retracted nipple. This latter point is supposed to be of considerable weight, though, in reality, it is not of great importance in the aged, for in aged women one frequently finds retracted nipple with no sign of malignant disease. After working up her exceedingly vague history, I came to the conclusion that she probably had a carcinomatous breast. However, the circumstances within the Home were such that I did not wish to make it a major operation

unless absolutely unavoidable. A section into the breast was made, which confirmed my suspicion of carcinoma. This plan is not to be followed save under exceptional circumstances. The patient was operated upon and every reasonable precaution taken to preserve vitality, but she died within twenty-four hours. The important point in this connection is the question why she died, or rather why she, as a type of certain women, die following such operations; whether she had had for a long time this malignant growth that had progressed so slowly and painlessly that she had not been aware of it, and yet that this had so undermined her powers of resistance that she succumbed to an extirpation, for ordinarily such an operation should not kill a woman. She showed no evidence of great shock and she lost but little blood. I am inclined to believe that her powers of resistance were weakened by this process, which had been going on for some time, but I consider it debatable.

V.—SPINA BIFIDA.

The next case is not from my material. The specimen was sent to Dr. James Moores Ball to be stored in the college museum, and Dr. Ball kindly requested me to present it. It is a case of spina bifida which presents some unusual features. The operation was done in a country town. The following is the report of the case sent to Dr. Ball by Dr. John D. Seba, of Bland, Missouri, who had the case in charge:

"I was called at 10 o'clock A. M., June 10, 1905, to attend Mrs. M. P. in confinement. Patient aged nine-

teen years, first confinement. Presentation and everything else connected with the labor were normal, except that when head and shoulders were born the progress of labor was interrupted. This, as I found afterwards, was due to the large tumor or spina bifida, on the sacrum of the child. Gentle traction was made and the lower extremity was born with a gush. Upon examining the tumor, I found that a small portion was not covered with skin, and this part of the tumor was covered with only a glistening membrane. At this place the tumor had ruptured owing to the pressure it was subjected to in passing through the pelvis. Although the pelvis of my patient was large and roomy, yet a tumor as large as the child's head and connected with the spine and buttocks was too much to pass through it, hence the rupture at its weakest point. A diagnosis of spina bifida was made, first by the connection of the tumor with the spine; second, by seeing the fluid escape from the tumor, and, third, with the finger placed over the spine one could plainly feel absence of the coccyx. The child was separated from the placenta and the cord dressed. We then removed the placenta and dressed the mother. An examination revealed that she had escaped laceration. There was a continued oozing of fluid from the tumor and several stitches were taken to prevent further escape. The parents were told that the chances for life in the child were decidedly against it, that without an operation it could live only a few days, and that with an operation its chances for life were about one out of three. They consented to have me remove the tumor.

The child, which had been dressed, was carried two blocks to a photograph gallery where three different views were taken—one of the face, for the parents, and two of the pathological condition, a front and back view. The back view was the best, inasmuch as it showed the connection of the tumor with the spine, but the photographer accidentally spoiled the plate in preparation, hence we have only the front view to present here. The child was then carried to my office, two blocks, where we prepared for the removal of the tumor. Several points were decided upon: First, to do the operation as rapidly as possible; second, to use catgut sutures, and, third, to paint these sutures over with flexible collodion to prevent the introduction of germs, and also to prevent the escape of fluids from the site of operation. My son, Dr. W. E. Seba, administered the chloroform and he estimates that about 3 ii was all that was used. The child took the anesthetic well and went under it rapidly. We operated by the aid of a gasoline lamp, which gave a very good light. My colleagues, Dr. W. R. Ferrell, of Bland, and C. T. Leach, of Fuersville, assisted us in the operation. One difficulty in the operation was that the meconium was passing very frequently, and as the anus was near the tumor, as you may see by the photograph, this endangered the operation by the possibility of infection. One of the attendants held a pledget of absorbent cotton over the anus and kept the charge back until after the operation was completed. We could feel in the tumor some hard substances, and various speculations resulted as to what

they were. Some thought that these might be kidneys or the undeveloped uterus. But upon cutting the tumor open from the site of rupture to the spine, and turning the tumor inside out, it was found that these tumors were nerve endings and nerve ganglia. There was also found in it portions of muscles derived from the muscles of the back. This muscle tissue was supplied with two small arteries, which were caught with hemostatic forceps by an attendant as soon as cut. The cutting was done with a pair of straight scissors, along lines previously marked off. There was no dissecting out of spinal covering membrane, and no separate suturing of the same as is generally done in these cases. A clean cut was made with straight scissors and the skin was not joined end to end, but the two surfaces that were lined with cord membrane were held together and sutured with continued catgut sutures. The needle was passed about one-eighth of an inch below the two cut ends of the skin, from right to left, and the assistant always held the last taken suture taut until another stitch had been taken. The suture from left to right overlapped the cut ends of the skin, giving it the appearance of a sack sewed together over the seam. This gave it a rather bunglesome appearance, but it served the purpose well: first, putting the two inner sides of the cord membranes in opposition; and second, retaining the fluid. We wanted to hermetically seal the wound to prevent exudation of fluid, and second to prevent infection, the latter of which seemed the most difficult task of all since the site of operation was so

close to the anus, where fecal matter was likely to pass over it any moment, and infection meant death to our patient. The application of collodion was only kept up for two days, then it was painted over with ichthyol for one day, then we changed to a zinc oxid salve for a dressing. I will here state that to find a suitable dressing was our most difficult task, but none of them was entirely satisfactory to me. I will also state that had we had at our command an incubator to bring our patient from under the shock it would have been a great aid to us. The child turned pale and cold, and ceased breathing, and we had to apply restoratives to keep it alive. We applied warm cloths to its extremities, bathed it with brandy and performed artificial respiration until 11 o'clock that night, when our patient had apparently survived, and it was taken home to its mother. Before it was taken home it was allowed to nurse a woman who had a three weeks' old baby.

Until otherwise proven I claim this the youngest child that has undergone an operation under chloroform. It was just four hours old when operated on. The operation lasted about fifteen minutes. The patient seemed to make an uneventful recovery."

I consider this an exceedingly interesting history. There are one or two points to which I wish to allude. The doctor seemed to be solicitous in regard to the possibility of infection of his wound by meconium. Meconium infection takes place either through the mouth or anus; if through the mouth, either from the air or mucus; if it takes place through the anus it occurs from the air, bath,

clothing or the vagina of the mother. If it does take place,—it does so within twenty-four hours at the latest. To show how rapidly it occurs,—Escherich found germs in the rectum from three to seven hours after birth. I am not inclined to believe in the possibility of kidneys or uterus being found in this sac. Such a thing has not occurred in my experience, and so far as I am aware is not on record in the literature. In regard to the nerve endings I believe the doctor to be not altogether correct. I will show you the fragment he speaks of and incidentally I wish you to note the size of the tumor, though contracted with strong formal solution. You will see this band of muscle to which he refers. You will see also a few cystic bodies, one of which has ruptured since I first noted it. The so-called “nerve endings” and “nerve ganglia” you will find here in a stellate form. In my judgment these are tendinous terminations of the muscle fibers. I find no evidence of the presence of the cord. I find no evidence of large nerve bundles, but at the same time I do not feel at liberty to make a positive statement, for no sections have been made, owing to the fact that the unutilized specimen is to be preserved in the museum. I should be very glad to have Dr. Blair or others give their opinion in regard to the use of the incubator for very young children as suggested by Dr. Seba as a prophylactic against shock. I do not recall that a child under four hours old has been operated upon under anesthesia and survived.

In spina bifida the spinal laminæ fail to unite, due to faulty fusion of

the blastoderm; it may also be due to pressure, *e. g.*, hydrops cerebrospinalis. It occurs in about the ratio of 1:1000.

Various names have been applied to spina bifida according to the development: (1) *Spina bifida cervicalis*; (2) *spina bifida dorsalis*; (3) *spina bifida lumbo-sacralis*. There are cases known as *myelocoele*, in which the skin is absent. This is held to be invariably fatal. *Meningocoele* is applied to cases where there is a prolapse in the meninges of the cord. It occurs in about 8 to 12 per cent. of all cases. In *meningomyelocoele*, both membranes and cord are involved. This is by far the most frequent, comprising from 62 to 86 per cent. of all cases. *Syringomyelocoele* or *myelocystocoele* is an extreme ballooning of the central canal and is very rare; de Ruyter states that it always is lateral. In *rhachischisis* there is a bony separation, while in *rachiochysis*, fluid will be found in the canal. In *hydrorrhachis externa* is found a serous effusion into the subarachnoid space; in *hydrorrhachis interna* there is an effusion into the central canal of the cord. Sex is generally supposed to be a matter of indifference in the distribution of these cases. However, von Moltke has reported fifty-eight cases of spina bifida sacro-coccygealis, forty-four cases occurring in the male, fourteen in the female. The literature records one case in which there was fissure of the entire column. The course varies; there may be spontaneous closure. Frequently in such cases there develops an increased tension which manifests itself by dilatation of the ventricles of the brain and separation of the cranial sutures. There is

also what is known as the obstructive form in which the nerve fasciculi emerging and returning, will so fill the entire channel that in time they will block it—pressure symptoms will ordinarily be absent, and pressure upon the tumor will fail to induce increased intracranial pressure. In another form ulceration of the wall of the tumor will take place, this usually is found in hydrorrhachis interna, and may occur ante or postnatal. Frequently where there is a perforation, a dribbling of spinal fluid persists. Infection is not uncommon. Finally, hemorrhage into the sac may occur either natal or postnatal. Usually these children become asthenic, there is incontinence of urine and feces, paraplegia, ulceration with or without infection and convulsions followed by death. Yet it is not invariably fatal for we know of adults that are spinal bifids and yet lead fairly normal lives. In diagnosis in the lumbo sacral variety, we must distinguish between post-rectal dermoids, cystic hygroma, lipoma, sarcoma, ischiatic hernia, congenital sexual tumors (spina bifida anterior in the female) and sacro-coccygeal teratomata.

The treatment, at various times recommended, consists in the application of elastic ligatures, aspiration, injection of fluids (Brainard or Morton), electrolysis, and primary extirpation with closure. We have gone far from the dictum of Bardeleben, who, in 1867, said (in reference to the latter): "It is too dangerous in comparison with its advantages, and should be completely discarded." In operation on meningoceles there are 80 per cent. recoveries; meningomyeloceles give 50 per cent. recovery. Wernitz has

reported 153 operations, with 87 recoveries and 76 deaths; mortality 56 per cent.

Appropriate surgical treatment consists in an elliptical incision; restore nerves to canal; endeavor to approximate the laminæ, or employ periosteal attachments, or, if this be impossible, bone flaps, bone grafts, and celluloid plates. *Especial care must be paid to detailed asepsis.* Sometimes leakage persists, and there is danger of the patient dying of asthenia. Usual causes of death after operation are meningitis, bronchitis, enteritis, and post-operative shock from cerebro-spinal leakage.

St. Clair has given us the following series of tests for the determination of the identity of cerebro-spinal fluid: (1) It is usually transparent like water, and contains no sediment, but we sometimes find it quite cloudy. (2) It is either tasteless or faintly saline, faintly alkaline in reaction. (3) Specific gravity between 1005 and 1010. (4) Not viscous; gives no precipitate (mucin) on adding acetic acid. (5) On boiling, there is not more than a trace of coagulum of serum globulin; serum albumin is usually absent, for, after saturating with magnesia sulphate and filtering off the precipitated globulin, no proteid is found in filtrate. (6) Boiled with Fehling's solution, reduction takes place. (7) The reducing substance may be obtained by evaporating to dryness an alcoholic extract of the fluid; it is then found in needle-like crystals (pyrocatechin). (8) An aqueous solution of this residue does not ferment with yeast. (9) The fluid is absolutely sterile.

DISCUSSION.

Dr. Joseph Grindon, referring to Dr. Sharpe's report of an ovarian cyst, following double salpingo-oophorectomy, in which the three cases of Schroeder had been mentioned, said that the first case would be of great interest if one could accept the idea that the failure to find a malignant condition at the first operation, was proof that there was no such condition there. Assuming that there was none, and that at the later operation it was found, it reminded one of Lack's unique observation, and his refusal to accept what was to-day the dominant notion—that the cause of carcinoma is from without. He claims that it originates from within, and is not due to any germ. He produced the disease in a single instance by slicing the ovaries of a rabbit and turning the fragments loose in the abdominal cavity, later finding the peritoneum studded with carcinomatous nodules. Schroeder's case seemed to be in line with this observation.

Dr. John C. Morfit, speaking of the old lady with carcinoma of the breast, and Dr. Sharpe's question, said that these women in charitable institutions were patient, long sufferers, and when they did reach the physician with carcinoma, a pretty thorough going over would discover some other condition quite as serious as the malignancy. This case reminded him of a patient, a woman of seventy-one, with a malignant ulcerating breast, temperature of 104 and 105, no axillary enlargement, but a very large mammary abscess, and pus in the urine. The patient was septic. He had done a Halsted operation and dissected out

the axillary glands. The temperature was reduced immediately from the drainage, but there was no effort at healing whatever. She lingered for two or three weeks, and a bed sore developed over sacrum, followed in forty-eight hours by a collection of fully a pint and a half of greenish pus under the integument. This was evacuated. Four days later there was about a quart of pus under the scapula, and that was evacuated, but the patient died of exhaustion and sepsis a few days later. She gave no symptoms of any serious kidney trouble, although the pus in the urine was suspicious. The pericardium was found completely adherent to the heart, which lay as if in a spider's web of adhesions. There was no malignancy about the gall bladder or stomach, but the right kidney was full of pus, and there was a stone in the pelvis of the kidney. Left kidney normal. So, whatever harm the malignancy did was overshadowed by the other conditions. He added that he now had under observation an old lady with a tumor in the right breast as big as the fist and hard as a stone, but the case was inoperable, because, in the upper right abdominal quadrant was another mass undoubtedly malignant as indicated by gastric analysis.

Dr. Sharpe, in closing, was unable to say how much urine was passed subsequent to operation. The patient had not previously complained to him of much pain, but after her death he heard rumors that she had complained to her friends of a great deal of pain. This occurred in a Home for Old Women, and the inmates of such institutions have peculiar ways of living, some being exceedingly loqua-

cious and others concealing their bodily infirmities, so that it is often exceedingly difficult to determine a definite anamnesis. At the operation the axillary glands, the supra and infra-clavicular glands, and those in the triangles of the neck were cleaned out. But one gland, and that infra-clavicular, seemed palpably enlarged. Hemorrhage was insignificant. The vessels should be caught as severed, thus necessitating a liberal use of ligatures and clamps. It was doubtful if the patient had lost four ounces of blood. She was started under chloroform anesthesia, and later ether

was substituted for its stimulating effect. The time of operation was four hours. He again wished to emphasize the point that a retracted nipple in a woman beyond the meridian of life, as a diagnostic sign of malignancy, was not dependable.

Dr. Robert Barclay asked Dr. Sharpe if he was correct in having understood the doctor to say that the patient was under general anesthesia for four hours.

Dr. Sharpe replied that during the last half or three-quarters of an hour the patient received no anesthetic; she was on the table for four hours.

A STUDY OF DIGITALIS*.

By S. A. JOHNSON, M. D., Nevada, Missouri.

This paper is a short resume from the literature of a subject very important, but which has been more or less neglected by most of us, or, at best, the accepted teachings have not been generally observed in the administration of it. So I have selected this subject, first, from its importance, and, second, because of its complexity. The more extensively you read the literature on it the more difficulty you will have harmonizing that literature into a single paper; but, laying aside one or more important differences, a middle ground can be taken that is not radically at variance with accepted knowledge of the subject.

Digitalis has been known to medicine for centuries.

As early as 1597 a treatise was published on it. Its therapeutic powers were investigated in 1776, and in 1871

a medal was given to Notivelle for the discovery of a white crystalline body, supposed to be the active principle, but was later discovered to be a mixture and did not represent the active principle, and so today we have no one principle that answers for the combination of the several principles in digitalis.

Schmiedeberg's analysis of digitalis is the accepted one at the present time, although a definite decision in regard to all its constituents cannot be made, but according to this analysis digitalis consists of four active principles, namely: digitalin, digitoxin, digitalein and digitonin, and an inert principle—digitin, besides other constituents, as tannin, starch, sugar, gum, coloring matters, oils and acids.

Digitalis has no alkaloid, and is, therefore, very unsatisfactory of assay. First, Merck lists two amorphous, white-yellow powders called

* Read before the Vernon County Medical Society, June 6, 1905.

digitalin, French and German. The French digitalin is soluble in water; dose, 1-250 grain. A similar body to this was dropped from our U. S. P. in 1880. This German digitalin is soluble in alcohol, not soluble in water; dose, 1-32 to 1-24 grain. Both have the same characteristic action on the heart.

Second, digitoxin, most abundant and most active constituent of digitalis, is a white crystalline powder, slightly soluble in alcohol, not soluble in water; dose, 1-250 to 1-125 grain. This forms a sediment in alcoholic preparations because of its slight solubility.

Third, digitalein is soluble in alcohol and water; it is a mixture; dose, 1-100 of a grain.

These three are the active cardiac stimulants of digitalis, and are antagonized in their action by digitonin, a cardiac depressant, insoluble in alcohol but soluble in water, and is the principle upon which the diuretic action of digitalis depends. Alcoholic preparations, while markedly diuretic in low arterial pressure cases, do not exert so great a stimulant or irritant effect upon the kidneys as do the infusions (Brunton) which contain this diuretic property, digitonin. From the solubility of digitalein, it is also in the infusions.

Digitalin, digitoxin and digitalein are the three heart stimulants found in the alcoholic preparations. Their combined action stimulates the muscular fibers in the cardiac and the arterial walls, thus increasing the cardiac force and in a double way raising blood pressure. These effects come from the stimulation of the nerve endings of the cardiac ganglion, and

at the same time slow the heart by stimulating the end fibers of the vagus—the inhibitory nerve of the heart—by prolonging diastole.

An important consideration is the difference of digitalis from other cardiants, in its powerful stimulation of the arterial walls. This prevents the heart strengthening from resulting in a clear gain (especially in view of its slowness), for resistance at the same time is increased. Since the increased heart action depends upon the muscular cardiac walls, it cannot do so well when they are weakened by dilation or "fatty degeneration," and when there is an aortic regurgitation, for we increase the arterial resistance more than we strengthen the heart, and thereby favor the backing up of the blood in the heart. If one lesson is more important than another in the study of the action of digitalis, it is that its heart range of usefulness is on failing compensation, a beginning weakness of the heart muscle, so all the strengthening of the organ should be husbanded.

While digitalis slows the heart and tones its muscular walls, it unfortunately adds resistance to the circulation in the arterial walls. To my mind, this positive effect of digitalis should always be borne in mind, and minimized by giving an arterial relaxant to counteract this effect. The nitrites and nitro-glycerine will accomplish this. In lobar pneumonia, I generally give nitrite of sodium between the doses of strychnine and caffeine, etc., if the heart is tumultuous or labored, and I prescribe it invariably if I resort to digitalis. It then follows that digitalis, in well-regulated doses, will restore rhythm

to an irregular heart. It is pre-eminently useful in a dilated, rather than in a weak, heart. The effects of digitalis are slow in coming on, usually several hours. The effects are similarly slow in passing off; so, when great promptness is required, digitalis is not available.

Digitonin and digitalein are the active principles found in the infusions. If this is borne in mind, it is not surprising that in practice it is found that the infusion is not a serviceable cardiac stimulant, or that the tincture does not act well as a diuretic. If this is so, should not our prescriptions for the infusion call for the watery maceration of the leaves, instead of being made from dilution of the tincture? Again, owing to the poor quality of much of the digitalis on the market, or at least the varying strength of the products of the various manufacturers, and with the unsatisfactory method of assaying, and the different standards of strengths by different companies, it is best to specify one manufacturer's product, and study its limitations and effects.

From the fact that digitoxin is so feebly soluble in alcohol, the tincture should be given dropped on sugar or bread, the patient taking no water shortly before or afterwards, so as not to precipitate this active principle by water.

This subject is too lengthy to deal minutely with its therapy or toxic effects. No form of organic disease contraindicates the use of digitalis when the compensatory action of the heart is failing. Accumulative action in the sense of an accumulation of the drug in the system, followed by an

outburst of symptoms, are no longer feared. No such action occurs.

Toxic symptoms arise only from an overdose or from prolonged administration, and the condition of poisoning is followed by the regular train of symptoms, viz.: First, stimulation of the vasar motor nerves, with high arterial pressure, then a following relaxation, with reduced blood pressure and weak heart, and finally failure of the circulation, with the heart in diastole. One author maintains that death is usually due to paralysis of the heart in ventricular contraction; and another one has found it in diastole. Both conditions are possible; first, from a tetanizing effect of the drug on the cardiac ganglion, and the last from the effect of a paralysis of the vagi.

A few of the contradictory teachings of digitalis are the following:

Digitalein is not found in the leaves. Another, as Ossler, finds the tincture as satisfactory a diuretic as infusion. Another claims that the effect on the heart and action is nil in a healthy person, while others ascribe to the diuretic properties, its first effect of contracting the renal arterioles, then shortly a dilatation of these vessels in the kidneys, and with general high arterial pressure increased elsewhere over the body, makes an ideal condition for the most favored diuresis, therefore acting upon a healthy as well as a venously engorged kidney.

One author claims that digitalis is oxidized in the system, while another that it is excreted largely by the kidney thereby explaining its activity on the kidneys. These conditions are not so vital a discrepancy as to effect

an intelligent understanding of the action of the drug in disease.

As stated, this paper has been composed after a considerable study of recent works on this subject, and I think it well worth our time to consider it. There are only a few drugs with so pronounced activity whose general properties have been in the main understood, that have been given so little close study. Much has been necessarily omitted from this important subject in spite of the fact that we have no more valuable one in the materia medica and no perfect substitute for its specific action, and I hope the discussion that follows will exhaust what I have omitted.

DISCUSSION.

Dr. Buchanan, Dr. Johnson: Digitalis is a complex preparation, and I think the speaker was correct in this statement; but why give a complex drug when we can give a specific alkaloid? I use digitalin. Dr. Johnson gives nitrite of soda as a relaxant; I give aconitine. Digitalis and aconite

in highbounding pulse in pneumonia act excellently.

Dr. Dulin: Give digitalis in weak, irregular pulse, not in rapid bounding pulse. In pneumonia it acts as an eliminant by eliminating the toxins through the kidneys. It is the best cordial-tonic we have, except strychnia. I don't believe it is a direct tonic as strychnia, but acts by eliminating the toxins that effect the heart muscle.

Dr. Churchill: Does digitalis have a desired effect in high temperature? I have been taught that it does not.

Dr. Johnson: Digitalis was given to reduce temperature. It does not have such an effect when temperature is high. It is dangerous when given unnecessarily. Don't give it when compensation is sufficient. It is good in all valvular troubles, as it regulates circulation. Digitalis does not have a cumulative action. Give the infusion for diuretic purposes. Digitalis is contra-indicated in fatty degeneration.

Constitution and By-Laws

—OF THE—

Missouri State Medical Association

ADOPTED 1903

CONSTITUTION.

ARTICLE I.—NAME OF THE ASSOCIATION.

The name and title of this organization shall be the Missouri State Medical Association.

ARTICLE II.—PURPOSES OF THE ASSOCIATION.

The purposes of this Association shall be to federate and bring into one compact organization the entire medical profession of the State of Missouri, and to unite with similar Associations in other States to form the American Medical Association, with a view to the extension of medical knowledge, and to the advancement of medical science; to the elevation of the standard of medical education, and to the enactment and enforcement of just medical laws; to the promotion of friendly intercourse among physicians, and to the guarding and fostering of their material interests; and to the enlightenment and direction of public opinion in regard to the great problems of State medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public in the prevention and cure of disease, and in prolonging and adding comfort to life.

ARTICLE III.—COMPONENT SOCIETIES.

Component Societies shall consist of those county medical societies which hold charters from this Association.

ARTICLE IV.—COMPOSITION OF THE ASSOCIATION.

SECTION 1. This Association shall consist of Members, Delegates and Guests.

SEC. 2. MEMBERS. The Members of this Association shall be the members of the component county medical societies.

SEC. 3. DELEGATES. Delegates shall be those members who are elected in accordance with this Constitution and By-Laws to represent their respective component societies in the House of Delegates of this Association.

SEC. 4. GUESTS. Any distinguished physician not a resident of this State may become a guest during any Annual Session upon invitation of the officers of this Association, and shall be accorded the privilege of participating in all of the scientific work for that Session.

ARTICLE V.—HOUSE OF DELEGATES.

The House of Delegates shall be the legislative and business body of the Association, and shall consist of (1) Delegates elected by the component county societies, and (2), *ex-officio*, the officers of the Association as defined in this Constitution.

ARTICLE VI.—SECTIONS AND DISTRICT SOCIETIES.

The House of Delegates may provide for a division of the scientific work of the Association into appropriate Sections, and for the organization of such Councillor District Societies as will promote the best interests of the profession, such societies to be composed exclusively of members of component county societies.

ARTICLE VII.—SESSIONS AND MEETINGS.

SECTION 1. The Association shall hold an Annual Session, during which there shall be held daily General Meetings, which shall be open to all registered members, delegates and guests.

SEC. 2. The time and place for holding each Annual Session shall be fixed by the House of Delegates.

ARTICLE VIII.—OFFICERS. * *

SECTION 1. The officers of this Association shall be a President, five Vice-Presidents, a Secretary, an Assistant Secretary, a Treasurer and sixteen Councillors.

SEC. 2. The President and Vice-Presidents shall be elected for a term of one year. The Secretaries and the Treasurer shall be elected by the council at its Annual Meeting, and each shall hold his office for one year. The Councillors shall be elected for terms of five years each, being so divided that four shall be elected each year. All of these officers shall serve until their successors are elected and installed.

SEC. 3. The officers, except the President, Secretaries and Treasurer, shall be elected by the House of Delegates on the morning of the last day of the Annual Session, but no Delegate shall be eligible to any office named in the preceding section except that of Councillor, and no person shall be elected to any such office who is not in attendance on that Annual Session and who has not been a member of the Association for the past two years.

SEC. 4. The President shall be elected by the General Assembly on the last day of the meeting.

ARTICLE IX.—FUNDS AND EXPENSES.

Funds for meeting the expenses of the Association shall be arranged for by the House of Delegates by an equal per capita as-

assessment upon each county society to be fixed by the House of Delegates, by voluntary contribution, and from the profits of its publications. Funds may be appropriated by the House of Delegates to defray the expenses of the Annual Sessions, for publication, and for such other purposes as will promote the welfare of the Association and profession.

ARTICLE X.—REFERENDUM.

The General Meeting of the Association may, by a two-thirds vote, order a general referendum upon any question pending before the House of Delegates, and the House of Delegates may, by a similar vote of its own members, or after a like vote of the General Meeting, submit any such question to the membership of the Association for a final vote; and if the persons voting shall comprise a majority of all the members present, a majority of such vote shall determine the question, and be binding upon the House of Delegates.

ARTICLE XI.—THE SEAL.

The Association shall have a common Seal, with power to break, change or renew the same at pleasure.

ARTICLE XII.—AMENDMENTS.

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the delegates registered at that Annual Session, provided that such amendment shall have been presented in open meeting at the previous Annual Session, and that it shall have been sent officially to each component county society at least two months before the session at which final action is to be taken.

BY-LAWS.

CHAPTER I.—MEMBERSHIP.

SECTION 1. All members of Component Societies shall be privileged to attend all meetings and take part in all of the proceedings of the Annual Sessions, and shall be eligible to any office within the gift of the Association.

SEC. 2. The name of a physician upon the properly certified roster of members, or list of delegates, of a component society which has paid its annual assessment, shall be *prima facie* evidence of his right to register at the annual session in the respective bodies of this Association.

SEC. 3. No person who is under sentence of suspension or expulsion from any component society of this Association, or, whose name has been dropped from its roll of members, shall be entitled to any of the rights or benefits of this Association, nor shall he be permitted to take any part in any of its proceedings until such time as he has been relieved of such disability.

SEC. 4. Each member in attendance at the annual session shall

enter his name on the registration book, indicating the component society of which he is a member. When his right to membership has been verified by reference to the roster of his society, he shall receive a badge which shall be evidence of his right to all the privileges of membership at that session. No member or delegate shall take part in any of the proceedings of an annual session until he has complied with the provisions of this section.

CHAPTER II.—ANNUAL AND SPECIAL SESSIONS OF THE ASSOCIATION.

SECTION 1. The Association shall hold an annual session at such time and place as has been fixed at the preceding annual session (or as fixed by this Constitution and By-Laws).

SEC. 2. Special sessions of either the Association or of the House of Delegates shall be called by the President at his discretion or upon petition of twenty delegates.

CHAPTER III.—GENERAL MEETINGS.

SECTION 1. The General Meetings shall include all registered members, delegates and guests, who shall have equal rights to participate in the proceedings and discussions, and, except guests, to vote on pending questions. Each General Meeting shall be presided over by the President, or in his absence or disability, or by his request, by one of the Vice-Presidents. Before it, at such time and place as may have been arranged, shall be delivered the annual address of the President and the annual orations, and the entire time of the Session so far as may be shall be devoted to papers and discussions relating to scientific medicine.

SEC. 2. The General Meeting shall have authority to create committees or commissions for scientific investigations of special interest and importance to the profession and public, and to receive and dispose of reports of the same; but any expense in connection therewith must first be approved by the House of Delegates.

SEC. 3. Except by special vote, the order of exercises, papers and discussions as set forth in the official program shall be followed from day to day until it has been completed.

SEC. 4. No address or paper before the Association, except those of the President and Orators, shall occupy more than twenty minutes in its delivery; and no member shall speak longer than five minutes, nor more than once on any subject.

SEC. 5.—All papers read before the Society shall be its property. Each paper shall be deposited with the Secretary when read, and if this is not done it shall not be published.

CHAPTER IV.—HOUSE OF DELEGATES.

SECTION 1. The House of Delegates shall meet annually at the time and place of the annual session of the Association, and shall so fix its hours of meeting as not to conflict with the first General Meeting of the Association, or with the meeting held for the address of the President and the annual orations, and so as to give delegates an opportunity to attend the other scientific proceedings

and discussions so far as is consistent with their duties. But if the business interests of the Association and profession require, it may meet in advance, or remain in session after the final adjournment of the General Meeting.

SEC. 2. Each component county society shall be entitled to send to the House of Delegates each year one delegate for every 50 members, and one for each major fraction thereof, but each county society holding a charter from this Association, which has made its annual report and paid its assessment as provided in this Constitution and By-Laws, shall be entitled to one delegate.

SEC. 3. A majority of the registered delegates present shall constitute a quorum, and all of the meetings of the House of Delegates shall be open to members of the Association.

SEC. 4. It shall, through its officers, council and otherwise, give diligent attention to and foster the scientific work and spirit of the Association, and shall constantly study and strive to make each annual session a stepping-stone to future ones of higher interest.

SEC. 5. It shall consider and advise as to the material interests of the profession, and of the public in those important matters wherein it is dependent upon the profession, and shall use its influence to secure and enforce all proper medical and public-health legislation, and to diffuse popular information in relation thereto.

SEC. 6. It shall make careful inquiry into the condition of the profession of each county in the State, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist, and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse between physicians of the same locality, and shall continue these efforts until every physician in every county of the State who can be made reputable has been brought under medical society influence.

SEC. 7. It shall encourage post-graduate and research work, and shall endeavor to have the results utilized and intelligently discussed in the county societies.

SEC. 8. It shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that body.

SEC. 9. It shall, upon application, provide and issue charters to county societies organized to conform to the spirit of this Constitution and By-Laws.

SEC. 10. In sparsely settled sections it shall have authority to organize the physicians of two or more counties into societies to be designated by hyphenating the names of two or more counties so as to distinguish them from district and other classes of societies, and these societies, when organized and chartered, shall be entitled to all the privileges and representation provided herein for county societies, until such counties may be organized separately.

SEC. 11. It may divide the counties of the State into Councillor Districts.

SEC. 12. It shall have authority to appoint committees for special purposes from among members of the Association who are not members of the House of Delegates, and such committees may report to the House of Delegates in person, and may participate in the debate thereon.

SEC. 13. It shall approve all memorials and resolutions issued in the name of the Association before the same shall become effective.

SEC. 14. It shall present a summary of its proceedings to the last general meeting of each annual session, and shall publish the same in the transactions.

CHAPTER V.—ELECTION OF OFFICERS.

SECTION 1. All elections shall be by secret ballot, and a majority of the votes cast shall be necessary to elect.

SEC. 2. The House of Delegates on the first day of the Annual Session shall select a Committee on Nominations consisting of ten delegates, no two of whom shall be from the same councillor district. It shall be the duty of this Committee to consult with the members of the Association and to hold one or more meetings at which the best interests of the Association and of the profession of the State for the ensuing year shall be carefully considered. The Committee shall report the result of its deliberations to the House of Delegates in the shape of a ticket containing the name of one member for each of the offices to be filled at that annual session.

REPORT.

SEC. 3. The report of the Nominating Committee and the election of officers shall be the first order of business of the House of Delegates after the reading of the minutes on the morning of the last day of the General Session.

SEC. 4. Nothing in this article shall be construed to prevent additional nominations being made by members of the House of Delegates.

CHAPTER VI.—DUTIES OF OFFICERS.

SECTION 1. The President shall preside at all meetings of the Association and of the House of Delegates; shall appoint all committees not otherwise provided for; shall deliver an annual address at such time as may be arranged; shall give a deciding vote in case of a tie, and shall perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession of the State during his term of office, and, as far as practicable, shall visit, by appointment, the various sections of the State and assist the Councillors in building up the county societies, and in making their work more practical and useful.

SEC. 2. The Vice-Presidents shall assist the President in the discharge of his duties. In the event of his death, resignation or removal, the Council shall select one of the Vice-Presidents to succeed him.

SEC. 3. The Treasurer shall give bond for the trust reposed in him whenever the House of Delegates shall deem it requisite. He shall demand and receive all funds due the Association, together with the bequests and donations. He shall, under the direction of the House of Delegates, sell or lease any estate belonging to the Association, and execute the necessary papers; and shall, in general, subject to such direction, have the care and management of the fiscal affairs of the Association. He shall pay money out of the Treasury only on a written order of the President countersigned by the Secretary; he shall subject his accounts to such examination as the House of Delegates may order, and he shall annually render an account of his doings and of the state of the funds in his hands. He shall charge upon his books the assessments against each component county society at the end of the fiscal year which shall be April 1st; he shall collect and make proper credits for the same, and perform such other duties as may be assigned to him.

SEC. 4. The Secretary, acting with the Committee on Scientific Work, shall prepare and issue the programs for and attend all meetings of the Association and of the House of Delegates, and he shall keep minutes of their respective proceedings in separate record books. He shall be custodian of all record books and papers belonging to the Association, except such as properly belong to the Treasurer, and shall keep account of and promptly turn over to the Treasurer all funds of the Association which come into his hands. He shall provide for the registration of the members and delegates of the Annual Sessions. He shall keep a card index register of all the legal practitioners of the State by counties, noting on each his status in relation to his county society, and upon request shall transmit a copy of this list to the American Medical Association for publication. In so far as it is in his power he shall use the printed matter, correspondence and influence of his office to aid the Councillors in the organization and improvement of the county societies, and in the extension of the power and usefulness of this Association. He shall conduct the official correspondence, notifying members of meetings, officers of their election, and committees of their appointment and duties. *He shall act as Chairman of the Committees on Scientific Work and on Publication.* He shall employ such assistants as may be ordered by the Council or the House of Delegates. He shall annually make a report of his doings to the House of Delegates.

In order that the Secretary may be enabled to give that amount of time to his duties which will permit of his becoming proficient, it is desirable that he should receive some compensation. The amount of his salary shall be fixed by the House of Delegates.

CHAPTER VII.—COUNCIL.

SECTION 1. The Council shall hold daily meetings during the annual session of the Association and at such other times as necessity may require, subject to the call of the Chairman or on petition of three Councillors. It shall meet on the last day of the annual

session of the Association for reorganization and for the outlining of work for the ensuing year. At this meeting it shall elect a Chairman and Secretary, and the latter shall keep a record of its proceedings. It shall, through its Chairman, make an annual report to the House of Delegates at such time as may be provided. It shall be the Executive Committee of the Association and shall act for the Association during the interval between meetings.

SEC. 2. Each Councillor shall be organizer, peacemaker and censor for his district. He shall visit each county in his district at least one a year for the purpose of organizing component societies where none exists, for inquiring into the condition of the profession, and for improving and increasing the zeal of the county societies and their members. He shall make an annual report of his doings, and of the condition of the profession of each county in his district to each annual session of the House of Delegates. The necessary traveling expenses incurred by such Councillor in the line of the duties herein imposed may be allowed by the House of Delegates upon a proper itemized statement, but this shall not be construed to include his expense in attending the annual session of the Association.

SEC. 3. Collectively the Council shall be the Board of Censors of the Association. It shall consider all questions involving the rights and standing of members, whether in relation to other members, to the component societies, or to this Association. All questions of an ethical nature brought before the House of Delegates or the General Meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members or of a county society, upon which an appeal is taken from the decision of an individual councillor. Its decision in all such cases shall be final.

SEC. 4. The Council shall provide and superintend the publication and distribution of all proceedings, transactions and memoirs of the Society, and shall have authority to appoint an editor and such assistants as it deems necessary. Further, to facilitate this work, it shall be the duty of the Secretaries of the Sections, during each Annual Session, or as soon thereafter as practicable, to deliver to the editor, or his duly appointed agent, all such proceedings, reports, addresses, papers and other documents, as may have been ordered for publication. All money received by the Council, or its agents, resulting from the discharge of the duties assigned to them, must be paid to the Treasurer of the Society, and all orders on the Treasurer for disbursements of money in any way connected with the work of publication must be indorsed by the Chairman of the Council and countersigned by the President and the Secretary of the Society. All matters of the Society pertaining to the expenditure of money for other purposes shall be referred, during the annual session, to the Council, who shall report upon the same within twelve hours, and if the House of Delegates orders the expenditure of money in connection with said report, the payment shall be made by the Treasurer as provided above. It shall be the further duty of the Council to hold the offi-

cial bond of the Treasurer for the faithful execution of his office, annually to audit and to authenticate his accounts, and to present a statement of the same in its annual report to the House of Delegates, which report shall also specify the character and cost of all the publications of the Society during the year, and the amount of all other property belonging to the Society under its control, with such suggestions as it may deem necessary.

In the event of a vacancy in the office of the Secretary of the Society, or the Treasurer, the Chairman of the Council shall fill the vacancy ad interim until the next meeting of the Council.

SEC. 5. The Council shall have the right to communicate the views of the profession and of the Association in regard to health, sanitation and other important matters to the public and the lay press. Such communications shall be officially signed by the Chairman and Secretary of the Council, as such.

CHAPTER VIII.—COMMITTEES.

SECTION 1. The standing committees shall be as follows:—

A Committee on Scientific Work.

A Committee on Public Policy and Legislation.

A Committee on Nominations.

A Committee on Arrangement, and such other Committees as may be necessary. Such committees shall be elected by the House of Delegates, unless otherwise provided.

SEC. 2. The Committee on Scientific Work shall consist of three members, of which the Secretary shall be a member, and shall determine the character and scope of the scientific proceedings of the Association for each session, subject to the instructions of the House of Delegates or of the Association, or to the provisions of the Constitution and By-Laws. Thirty days previous to each annual session it shall prepare and issue a program announcing the order in which papers, discussions and other business shall be presented, which shall be adhered to by the Association as nearly practicable.

SEC. 3. The Committee on Public Policy and Legislation shall consist of three members and the President and Secretary. Under the direction of the House of Delegates it shall represent the Association in securing and enforcing legislation in the interest of the public health and of scientific medicine. It shall keep in touch with professional and public opinion, shall endeavor to shape legislation so as to secure the best results for the whole people, and shall utilize every organized influence of the profession to promote the general influence in local, State and national affairs and elections. Its work shall be done with the dignity becoming a great profession and with that wisdom which will make effective its power and influence. It shall have authority to be heard before the entire Association upon questions of great concern at such time as may be arranged during the annual session.

SEC. 4. The Committee on Nominations shall be appointed and perform its duties in accordance with the provisions of Chapter V, Sections 2 and 3 of these By-Laws.

SEC. 5. The Committee of Arrangements shall consist of the component society in the territory in which the annual session is to be held. It shall, by committees of its own selection, provide suitable accommodations for the meeting places of the Association and of the House of Delegates and of their respective committees, and shall have general charge of all the arrangements. Its Chairman shall report an outline of the arrangements to the Secretary for publication in the program, and shall make additional announcements during the session as occasion may require.

CHAPTER IX.—ASSESSMENTS AND EXPENDITURES.

SECTION 1. An assessment of two dollars (\$2.00) per capita on the membership of the component societies is hereby made the annual dues of this Association. The Secretary of each county society shall forward its assessment together with its roster of all officers and members, list of delegates, and list of non-affiliated physicians of the county to the Secretary of this Association on or before April 1st in advance of each annual session.

SEC. 2. Any county society which fails to pay its assessment, or make the reports required, on or before the date above stated, shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Association or the House of Delegates until such requirements have been met.

SEC. 3. All motions or resolutions appropriating money shall specify a definite amount, or so much thereof as may be necessary for the purpose indicated, and must be approved by the Council and House of Delegates on a call of the ayes and noes.

CHAPTER X.—RULES OF CONDUCT.

The principles set forth in the Code of Ethics of the American Medical Association shall govern the conduct of members in their relations to each other and to the public.

CHAPTER XI.—RULES OF ORDER.

The deliberations of this Association shall be governed by parliamentary usage as contained in Roberts' Rules of Order, unless otherwise determined by a vote of its respective bodies.

CHAPTER XII.—COUNTY SOCIETIES.

SECTION 1. All county societies now in affiliation with this Association or those that may hereafter be organized in this State, which have adopted principles of organization not in conflict with this Constitution and By-Laws, shall, upon application to the Council, receive a charter from and become a component part of this Association.

SEC. 2. As rapidly as can be done after the adoption of this Constitution and By-Laws, a medical society shall be organized in every county in the State in which no component society exists, and charters shall be issued thereto.

SEC. 3. Charters shall be issued only upon approval of the Council or House of Delegates and shall be signed by the President and Secretary of this Association. The Council or House of Delegates shall have authority to revoke the charter of any component county society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws.

SEC. 4. Only one component medical society shall be chartered in any county. Where more than one county society exists, friendly overtures and concessions shall be made, with the aid of the Councillor for the District if necessary, and all of the members brought into one organization. In case of failure to unite, an appeal may be made to the Council, which shall decide what action shall be taken.

SEC. 5. Each county society shall judge of the qualification of its own members, but, as such societies are the only portals to this Association and to the American Medical Association, every reputable and legally registered physician who is practicing, or who will agree to practice, non-sectarian medicine shall be entitled to membership. Before a charter is issued to any county society, full and ample notice and opportunity shall be given to every such physician in the county to become a member.

SEC. 6. Any physician who may feel aggrieved by the action of the society of his county in refusing him membership, or in suspending or expelling him, shall have the right of appeal to the Council and to the House of Delegates.

SEC. 7. In hearing appeals the Council may admit oral or written evidence as in its judgment will best and most fairly present the facts, but in case of every appeal, both as a Board and as individual councillors in district and county work, efforts at conciliation and compromise shall precede all such hearings.

SEC. 8. When a member in good standing in a component society moves to another county in this State, his name, upon request, shall be transferred without cost to the roster of the county society into whose jurisdiction he moves.

SEC. 9. A physician living on or near a county line may hold his membership in that county most convenient for him to attend, on permission of the society in whose jurisdiction he resides.

SEC. 10. Each county society shall have general direction of the affairs of the profession in the county, and its influence shall be constantly exerted for bettering the scientific, moral and material condition of every physician in the county; and systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it embraces every qualified physician in the county.

SEC. 11. Frequent meetings shall be encouraged, and the most attractive programs arranged that are possible. The younger members shall be especially encouraged to do post-graduate and original research work, and to give the society the first benefit of such labors. Official position and other preferments shall be unstintingly given to such members.

SEC. 12. At some meeting in advance of the annual session of this Association each county society shall elect a delegate or

delegates to represent it in the House of Delegates of this Association, in the proportion of one delegate to each fifty (50) members, or major fraction thereof, and the secretary of the society shall send a list of such delegates to the Secretary of this Association, at least ten days before the annual sessions.

SEC. 13. The secretary of each county society shall keep a roster of its members, and a list of the non-affiliated registered physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this State, and such other information as may be deemed necessary. He shall furnish an official report containing such information, upon blanks supplied him for the purpose, to the Secretary of this Association, on or before April 1st, in advance of each annual session, and at the same time that the dues accruing from the annual assessment are sent in. In keeping such roster the secretary shall note any changes in the personnel of the profession by death, or by removal to or from the county, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year.

CHAPTER XIII.—AMENDMENTS.

These By-Laws may be amended at any annual session by a majority vote of all the delegates present at that session, after the amendment has laid upon the table for one day.

Emergency clause provides for immediately going into effect after adoption.

JOURNAL

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EDITORIAL.

THE AMERICAN PLAGUE.

The earliest authentic account of yellow fever records its occurrence in the West Indies about 1760, at which time the disease was carried by Spaniards from Vera Cruz, where it claimed more than 3,000 victims. Twenty years later, out of an army of

8,000 sent from Spain to Havana, more than 2,000 died of yellow fever within two months after landing. Between 1870 and 1879 nearly 12,000 deaths are recorded for the city of Havana from yellow fever alone. In the United States during 1870, according to the board of experts appointed

by congress, more than 100,000 were stricken in their homes, and 20,000 lives sacrificed. Probably the first experimental inoculations began in Philadelphia during the yellow fever epidemic of 1802 and 1803, when Stubbin Furth, a medical student of the University of Pennsylvania, experimented upon himself by placing fresh black vomit and blood serum obtained from yellow fever patients into wounds made in his arms and legs. Failing in this, he inhaled the fumes from black vomit, which he heated over a sand bath in a small room, and then making the residue into small pills, he swallowed it. He administered black vomit to animals, injected it into their circulation and deposited it in their tissues. As the results of these and other experiments were negative, he concluded that yellow fever was neither infectious nor contagious, and reported these conclusions in his graduation thesis in 1804.

When in 1900, during the American occupation of Cuba, yellow fever became epidemic in Havana, a board was appointed to meet in that city for the purpose of continuing the study of the disease. The members were Drs. Walter Reed, James Carrol, Aristides Agramonte and Jesse W. Lazear. The conclusions were as follows:

1. *Bacillus icteroides* of Sanarelli was shown to be practically identical with the bacillus of hog cholera, from which it differs only in the source from which it is obtained.

2. Yellow fever is transmitted by a mosquito of the genus *stegomyia*, and all attempts to bring about the infection through contact with bedding, clothing and dejecta of yellow fever

patients have resulted in failure. Hence it follows that disinfection against yellow fever is valueless.

3. Yellow fever can be produced experimentally by the injection of blood drawn in the first and second days of the disease, but this has no direct bearing upon the transmission or prevention of the disease in its epidemic form.

4. The specific germ of yellow fever is sufficiently minute to pass through the pores of a bacteria-proof filter, and it is destroyed by a temperature of 131 degrees Fahrenheit.

Confirmation of the mosquito inoculation has been furnished by Dr. Guiteras, Havana; Drs. Ribas and Lutz, as well as the French commission in Brazil, and by a commission of the United States Public Health and Marine Hospital Service at Vera Cruz. A French commission from the Pasteur Institute, working recently in Brazil, has confirmed practically all the results of the American army commission.

The Mosquito theory of yellow fever transmission is on trial in Louisiana, and upon results arrived at by sanitary officials in their efforts to stamp out the epidemic by attacking the mosquito, depends the present acceptance or rejection of the theory as a practical working basis in the warfare against yellow fever.

The infected mosquito does not become dangerous until twelve days after biting yellow fever patients, but its contagion-carrying power may last six weeks or more. The total number of cases to date (Aug. 22d) is 1,385, and the total deaths 196, 14 per cent. In 1878, at this time, there were 1,355 cases and 496 deaths, 37 per cent. The

decrease in the death rate may be accepted as a triumph for modern medical methods. Undoubtedly the Marine Hospital service, acting with the local sanitary officials, have made some progress in staying the advance of yellow fever, and the general outlook is encouraging.

Mayor Behrman, on the 5th of August, issued a statement, in which he said: "The mosquito theory is accepted by our physicians and laymen alike, and there is nothing remaining to be done but to fight the mosquito, which is being done by oiling the gutters, and screening and oiling the cisterns. . . . We have the situation so thoroughly in hand that we will very shortly convince the outside world that by working on the mosquito theory, yellow fever will be entirely robbed of all its perils. . . . This is a fight wholly against the *stegomyia fasciata* mosquito." Such statement will go far to encourage the people of Louisiana, as it does to maintain the confidence of intelligent communities elsewhere.

THE LATEST ADDITION.

Physicians are beginning to realize the reason they have accomplished so little in the way of influencing legislation for the betterment of sustentation and suppression of public nuisances is due solely to their lack of reorganization.

The open contempt which law-makers express for the medical profession is based on the fact that it never has shown its power. Hence, physicians really injure themselves, as well as neglect their duty to the community, unless they do bind themselves into compact organization.

Physicians of Harrison county have recognized these facts and through the counsellor of the district, Dr. E. H. Miller, have organized the Harrison County Medical Society and become an integral part of the State Medical Association.

The following is a list of the members: Drs. A. H. Vandwert, F. H. Broyles, E. H. Bryson, C. H. Robertson, C. A. Mitchell, M. H. Eads, J. K. Chiff, C. W. Robertson, W. H. Wiley, C. J. Sellers, W. L. Stongton, A. W. Williams.

A NEW HOSPITAL.

The JOURNAL takes pleasure in announcing the establishment in St. Louis of a skin and cancer hospital, located on the southeast corner of Jefferson avenue and St. Charles street, consisting of a completely equipped hospital with forty beds and an out patient department, all of which is to be free of charge to patients enjoying its benefits.

The institution is founded upon the research idea for cancer and allied types of malignant diseases. Inoperable and incurable cancer cases, as well as the operable ones, will be admitted.

A pathologist, who will devote all of his time to the hospital, has been appointed and will conduct such scientific investigations as the opportunities of the hospital and clinic will permit. The following medical staff has been appointed: Drs. G. Baumgarten, N. B. Carson, J. R. Clemens, M. F. Engman, A. E. Ewing, E. C. Burnett, W. E. Fischel, Frank R. Fry, George Gellhorn, John Green, John B. Keber, F. J. Lutz, Guthrie McConnel, H. G. Mudd, Greenfield

Sluder, J. B. Shapleigh, Ellsworth Smith, Jr., Justin Steer, Fred Tausig.

NEW MEMBERS.

F. H. Broyls, Bethany.
 E. H. Bryson, Bethany.
 B. F. Bunch, Bloomington.
 J. K. Chiff, New Hampton.
 M. H. Eads, New Hampton.
 F. F. Lemon, Lincoln.
 L. O. Mason, Bevier.
 C. A. Mitchell, Blythedale.
 Wm. D. Noblitt, Lively.
 C. H. Robertson, Eggleville.
 C. W. Robertson, Ridgeway.
 C. E. Salyer, Callao.
 C. J. Sellers, Mt. Moriah.
 E. L. Stongton, Mt. Moriah.
 L. Thompson, Macon.
 A. H. Vandwert, Bethany.
 W. H. Wiley, Ridgeway.
 A. W. Williams, Ridgeway.

The numerous friends of Dr. Woodson Moss of Columbia, ex-president of the Missouri State Medical Association, will be grieved to learn of the death of his wife, Mrs. Sarah Anderson Moss, who died on August 21st; also of the accidental death on July 28th, of his son Thomas Harris Moss, Jr., who was only sixteen years of age.

The JOURNAL voices the sentiments of the medical profession of Missouri in extending heartfelt sympathies to Dr. Moss.

Elsewhere in this issue we publish the constitution and by-laws of the

Missouri State Medical Association. That the members of the profession may become familiar with the constitution and by-laws of the State Association, the Judicial Council recommended the printing of 2,000 copies in pamphlet form for distribution among the county societies. The secretary will forward copies of constitution in pamphlet form on request.

OBITUARY.

Dr. O. B. Hicklin died at his home in New London, Mo., on June 28th. He was born near Madisonville, Mo., September 24, 1833, and was educated in the common schools of his native state. He was graduated in medicine from the College of Physicians and Surgeons of Keokuk, Iowa, in 1876, and practiced in Missouri during his entire professional life. During the civil war he served in the Confederate army under General Price.

Dr. J. H. Stringfellow, of St. Joseph, Mo., died in that city on July 24th, aged eighty-six. Until a few years ago, when he retired from practice, he was one of the leading physicians of Western Missouri. He was graduated in 1845 from the Medical Department of the University of Pennsylvania. It is said he was the founder of the town of Atchison, Kansas, in 1854. He was a prominent figure in the troublesome times incident to the settlement of Northeastern Kansas and Northwestern Missouri.

COUNTY SOCIETY NOTES.

CAPE GIRARDEAU MEDICAL SOCIETY.

Dr. H. L. Cunningham, President.

Dr. John D. Porterfield, Jr., Secretary.

At the last meeting of the Cape Girardeau Medical Society the subject of "Obstetrics" was made the order of the evening, and the discussion was interesting and profitable.

At the next meeting a year-book will be prepared and the subjects classified for the next year. Each member will then be given a part of a subject for discussion, which he will be expected to prepare and have ready for the time when that subject is announced.

Everything points to a good society in Cape Girardeau county, and the attendance at this meeting was very good. JOHN D. PORTERFIELD, JR.,
Secretary.

HOWARD COUNTY MEDICAL SOCIETY.

Dr. A. W. Moore, President.

Dr. C. W. Watts, Secretary.

The Howard County Medical Society met at the office of the secretary in Fayette, on August 15th, the president, Dr. Moore, in the chair. Dr. N. E. Smith presented a case of urticaria pigmentosa and a case of tonsillitis, the latter in a child two years of age. Dr. P. C. Smith reported a case of fracture of femur in a child of two and one-half years. The injury was dressed with long and short splints, and the patient was reported doing well. Dr. Watts presented a case of tubercular synovitis following an attack of rheumatism in a boy

fourteen years old. Dr. Lee reported a case of embolism following puerperal peritonitis, which resulted fatally. Dr. Wright reported a case of icterus in a baby, which yielded to treatment.

Members present: Drs. Moore, McGee, Lee, N. E. Smith, P. C. Smith, Wright and Watts.

The next meeting will be held on September 19th.

C. W. WATTS, Reporter.

JEFFERSON COUNTY MEDICAL SOCIETY.

Dr. W. H. Farrar, President.

Dr. H. Will Elders, Secretary.

The Jefferson County Medical Society met in regular session at Festus, on July 24th. A large number of the members were present and all entered into a lively discussion of several important papers which were read.

On account of a railroad wreck the members from DeSoto and other towns were prevented from attending.

H. WILL ELDERS, Secretary.

PULASKI COUNTY MEDICAL SOCIETY.

Dr. W. L. Ragan, President.

Dr. G. W. Orrick, Secretary.

The Pulaski County Medical Society met in Crocker, at Hotel de Wagner, on Monday afternoon and evening, July 10th. Dr. Oliver, of Richland, read a very instructive and interesting paper on "Appendicitis," which was discussed by several of the members. Regrets were expressed of the absence of Dr. Carter, of Dixon,

who had promised a paper on "Typhoid Fever." Among the visiting physicians was Dr. Johnson of Rolla, the district counsellor. The visiting physicians were delightfully entertained at supper by the resident physicians. The society adjourned to meet at Dixon, the first Monday in November.

G. W. ORRICK, Secretary.

HOWELL COUNTY MEDICAL SOCIETY.

Dr. J. W. Bingham, President.

Dr. H. C. Shuttee, Secretary.

The Howell County Medical Society held its regular meeting on August 3. This was the annual business meeting.

Dr. Reiley led the discussion on "Refilling Prescriptions."

It was the opinion of those taking part in the discussion that something should be done to check the custom of refilling prescriptions for any one who presented a prescription to be refilled.

On motion, Dr. Reiley was appointed to secure the signature of physicians to a request to druggists asking them to agree not to refill prescriptions unless they were marked "*Refill*."

Dr. Shuttee led the discussion on "How Best to Handle Our Bad Accounts."

Dr. Thornburgh discussed the question of "Furnishing Medicines."

Dr. Thompson led the discussion on "Charity-Practice — How Much Should We Do?"

In the House of Delegates at the last meeting of the State Association, a motion was passed forbidding county societies carrying two classes of

members, one class paying dues for both State and county societies, others only for the latter, and not being reported as members. In order to conform our by-laws to this ruling Dr. Thompson introduced a resolution making the membership fee and annual dues \$3.00.

Adjourned to meet October 5.

H. C. SHUTTEE, Reporter.

CHARITON COUNTY MEDICAL SOCIETY.

Dr. H. C. Tatum, President.

Dr. C. A. Jennings, Secretary.

The Chariton County Medical Society convened in regular session on the afternoon of July 27th, Dr. Kirkpatrick, of Dalton, in the chair. Minutes of the last meeting were read and approved.

This session was devoted exclusively to clinics and reports on various cases not presented.

Dr. Hawkins, of Triplet, and Dr. Jennings, of Salisbury, were requested to read papers at the next meeting, to be held on August 31st at Salisbury.

W. L. BAKER, Reporter.

MONTGOMERY COUNTY MEDICAL SOCIETY.

Dr. J. L. Jones, President.

Dr. W. M. Wheeler, Secretary.

Montgomery County Medical Society met at Jonesburg in regular session on August 18th, the president, Dr. Jones in the chair.

On motion the regular program was dispensed with and Dr. J. Franklin Welch, of Salisbury, who was present, was invited to address the meeting. Dr. Welch responded and deliv-

ered a highly interesting talk on the "Benefits of County and State Organization in the Medical Profession." Dr. Welch's address convinced those present that such organization was for the best interests of the whole profession.

Dr. F. J. Tainter, of St. Charles, also addressed the meeting in an interesting and convincing way along the same lines.

The society then adopted resolutions in memory of the late Dr. J. F. Graves.

On motion the society adjourned to meet in Montgomery City, October 10th.

W. M. WHEELER, Secretary.

CLAY COUNTY MEDICAL SOCIETY.

Dr. L. J. Jones, President.

Dr. F. H. Matthews, Secretary.

The regular July meeting of the Clay County Medical Society was held in Excelsior Springs, July 31st. In the absence of the president, Dr. J. H. Rothwell presided. It has been the custom of this society for several years, to hold its July meeting in Missouri's noted health resort. The visiting members were royally entertained by the members of the society living in Excelsior Springs. Four very interesting papers were read as follows: "Diabetes Mellitus," by Dr. W. S. Wallace; "The Feeding and Medical Treatment of Children," by Dr. Frank Lightfoot; "Etiology of Syphilis, with a Few Practical Points on Treatment of Pertinary Cases of Several Years' Standing," by Dr. T. N. Bogart; "Management of Normal Labor," by Dr. J. T. Rice.

A number of interesting and unique cases were also reported.

Dr. J. M. Griffen, of Excelsior Springs was elected to membership.

A resolution thanking the members at Excelsior Springs for courtesies extended the society was adopted. This was one of the most instructive and enjoyable meetings that this society has held for years.

F. H. MATTHEWS, Reporter.

CLINTON COUNTY MEDICAL SOCIETY.

Dr. John Sturgis, President.

Dr. E. A. Colley, Secretary.

The Clinton County Medical Society met at Plattsburg on August 2d with a fair attendance.

A paper on "Albuminuria in Pregnancy" was read by Dr. Robt. W. Rea, in which he urged the members to be constantly on the watch for this complication, and cited a number of cases. The paper elicited an interesting discussion from the members.

Dr. G. B. Rush read a paper on "The Management of Diphtheria." The paper was to the point on treatment and prophylaxis and was discussed by Drs. Sturgis, Steckman, Winn and Rea.

Dr. Rush also reported a case of birth at six and one-half months, the infant being placed in an incubator and surviving. Dr. Rush said the temperature in incubators should not be allowed to run too high and cautioned against allowing incubator babies being fed from the breast before maturity.

The society received Dr. G. B. Rush from the Macon County Medical So-

ciety and Dr. J. W. Winn from the Platte County Medical Society.

E. A. COLLEY, Secretary.

ST. LOUIS COUNTY MEDICAL SOCIETY.

Dr. H. G. Wyer, President.

Dr. H. T. Randle, Secretary.

The St. Louis County Medical Society held its last regular meeting at the office of Dr. C. L. Armstrong, Webster Groves. Members present were H. C. Wyer, F. E. Guibor, W. H. Townsend, R. M. Higgins, Howard Carter, S. H. Reynolds, C. L. Armstrong and H. T. Randle. The meeting was called to order at 8:30 p. m. Minutes of the last meeting were read and approved. The committee on elections and ethics reported favorably on the name of Dr. Rolla Braey, of Wellston. Dr. W. H. Townsend presented his transfer and was elected by ballot. Under new business Dr. Carter made a motion that we postpone the regular meeting in August, and adjourn to meet again in September. The motion was seconded by Dr. Armstrong and carried. A motion was made by Dr. Higgins to change the time of meeting back to 2:00 p. m., seconded by Dr. Guibor and carried.

Dr. C. L. Armstrong read a most interesting paper on "Applied Electricity, Electrical Therapeutics, X-Ray or Roetgen Ray." He described minutely the elementary construction of the apparatus and instrument recently constructed for measuring the amount of rays used. After reading this excellent paper the demonstrations verified more than could be told. A vote of thanks was tendered Dr. Armstrong both for his

hospitality and for his excellent scientific offering.

On motion, adjourned.

H. T. RANDLE, Secretary.

PLATTE COUNTY MEDICAL SOCIETY.

Dr. R. P. Davis, President.

Dr. G. C. Coffey, Secretary.

The regular monthly meeting of the Platte County Medical Society was held in Platte City, Wednesday, August 2d, Dr. Davis, the president, in the chair. The following members were in attendance: Drs. Alton, A. S. Herndon, F. G. Dinwiddie, A. C. Barr, R. P. Davis, E. McD. Coffey, J. M. Hale, M. H. Moore, S. Redman, G. C. Coffey.

The minutes of the previous meeting were read and approved. Several interesting clinics were presented and brought forth a liberal discussion.

Dr. A. C. Barr, of Linkville. Dr. Spence Redman, of Platte City, and Dr. A. S. Herndon, of Camden Point, were appointed a committee to co-operate with the state committee to investigate the cause, treatment and prevention of tuberculosis.

Dr. F. G. Dinwiddie, of Camden Point, read the following paper, entitled:

MANAGEMENT OF SUMMER COMPLAINT OF CHILDHOOD.

Included under this general term we have several different conditions of disease, and while each should be treated according to its pathology and to the indications present, there is a general plan of treatment which is applicable and, I believe, necessary for all. The three principal indications are: 1. Removal of cause. 2.

Relief of nervous symptoms. 3. Promoting a normal condition of the digestive tract.

In carrying out the first there are several things to be done. It is of the utmost importance to stop all feeding at the outset for at least twenty-four hours, and even longer if necessary. When we consider that impure food is one of the main factors in the production of this class of diseases, we will readily see the necessity of this; besides, it gives rest to the digestive organs and facilitates the action of the remedies administered.

To clear the intestinal canal, which is of first importance, I prefer calomel and castor oil, if the stomach is not too irritable. At first I usually give from one tenth to one-sixth grains of calomel every half hour until six or eight doses have been given. I believe calomel has a three-fold action, for it not only stimulates the liver, but acts as a gastric sedative and an intestinal antiseptic. After this I usually give a dose of castor oil every twelve or twenty-four hours if there is a continuance of accumulation of septic material in the bowel. As heat is also one of the prime factors in the cause of these diseases, we should endeavor to keep the patient cool and comfortable. I usually instruct the mother or nurse to sponge the patient three or four times a day with tepid water, to which a small amount of soda bicarb. has been added. Keep the patient in the shade where he may have plenty of fresh air. Strict attention should be given to hygiene and sanitary measures. Another means of clearing out the

bowel and relieving irritation, is irrigation. This is especially useful when the colon is the seat of trouble. A pint of warm water, with some mild antiseptic, injected into the colon by means of a rubber catheter attached to a fountain syringe (being careful not to use too great force) used once or twice a day, will aid in carrying off the toxic products and counteract sepsis.

Before passing to the next general indication I would mention that I have found meat juice given in from ten to thirty drop doses every two to four hours, according to age and indication, will furnish all needed nourishment for several days. I allow plenty of cool water (previously boiled) given frequently and in small quantities.

In considering the treatment of the nervous symptoms we must be governed by the condition—whether it is one of excitation or depression. Oftentimes, if we would save our patients, we must look to this condition first. To a patient with bright eyes, pupils contracted and face flushed, showing active congestion of the brain, I give the *spc. tr.* of gelsemium, combined with the *spc. tr.* of aconite, every half to one hour until symptoms abate. To this may be added a few drops of sweet *spts. nitre* for each dose of the mixture. On the other hand, if the patient is in a semi-comatose condition, with cold, clammy skin, dull, expressionless eyes and dilated pupils, and marked depression, showing passive congestion of the brain, I would administer *spc. tr. belladonna* or *atropine* as being the indicated remedy.

I have also found the tinct. of passiflora very useful to allay nervous excitement in these cases.

After having cleansed the bowel thoroughly at the first, remedies to relieve irritation and to act as anti-septics, will, in the majority of cases, be found necessary in order to complete a cure. For this purpose, I believe, there is nothing better than a combination of bismuth, subgallate and salol, giving a powder containing from one to three grains each every two to four hours, according to age of patient. In a great many cases this will be all that is required, while in others it would be well to leave the patient on some good tonic to aid digestion and build up the system.

BENTON COUNTY MEDICAL SOCIETY.

Dr. G. S. Greeson, President.

Dr. S. O. Davis, Secretary.

The Benton County Medical Society held its regular meeting in Warsaw on August 2d, the President, Dr. G. A. Greeson in the chair. A number of subjects were presented, in the discussion of which all the members joined. The next meeting will be held on September 6th.

The following were elected to membership: Drs. F. F. Lemon of Lincoln; A. H. P. Bohning, Lincoln; W. P. Noblit, Lively.

S. O. DAVIS, Secretary.

COOPER COUNTY MEDICAL SOCIETY.

Dr. P. L. Hurt, President.

Dr. R. S. Holman, Secretary.

Cooper County Medical Society held its regular monthly meeting at Mill-

ion Hotel, Boonville, on August 1st, the Vice-President, Dr. F. R. Smiley, in the chair.

A number of papers were read and cases reported for discussion, the meeting being a very profitable one and enjoyed by the large number of members present.

R. S. HOLMAN, Secretary,

MARION COUNTY MEDICAL SOCIETY

Dr. R. H. Goodier, President.

Dr. F. Janet Reid, Secretary.

Marion County Medical Society held its regular meeting on August 4th, the attendance being very good for a mid-summer meeting. The president, Dr. Goodier, occupied the chair.

The subject for general discussion was "Summer Diarrhea." The subject of "Yellow Fever" was also discussed at some length.

Dr. J. N. Coons, honorary member, read the following paper entitled,

MEDICINE AS I HAVE KNOWN IT; OR FIFTY YEARS IN PRACTICE.

Mr. President and Fellow-Members of Marion County Medical Association:—My first experience in medicine left a bad taste in my mouth, my last gave me the heartache, with a feeling of "goneness" about my pocketbook.

I beg you will not ask when the first experience was had, for since Prof. Osler of Baltimore issued his ukase bulling the chloroform market I have felt a reticence in discussing time and events prior to sixty years ago.

When fifty years ago I took passage

in the medical craft I was full of enthusiasm and buoyant with hope that my life travels and studies would enable me to cure or relieve the ills of a large clientele, secure their gratitude and fill my empty bank account to repletion.

The first I realized, perhaps to the average moderation, the latter failed to come up to expectations. Notwithstanding this I have found much to cheer and pleasure me in my fifty years of arduous study and practice. The mere consciousness of work for the good of frail humanity has been a lasting comfort. Then the many kindnesses received at the hands of my medical brethren, sharing my labors in a noble cause have cheered and sustained me on the way.

And to see occasionally my hours, days or weeks of anxious but apparently hopeless effort to save a sick patient, perhaps a very dear friend, finally rewarded with success has filled my soul with gladness; and when later the convalescent came with fervent words of gratitude, as *sometimes* happened, to thank me for service rendered, emphasizing his thanks by a more liberal fee than I had named, my joy was complete and I rolled in the luxury of content.

But reverting to the practice of medicine fifty years ago, we need to disabuse our minds of any idea that our brethren of that day were deficient in intelligence or intellectuality. A careful reading of the medical authorities of that period, such as Watson or Williams of England, or George B. Wood of America, will soon convince the skeptical of their profound erudition and their powers of thoughtful logical analysis.

How then do we account for the crudities and errors characterizing the medical practice of that period? How explain the inordinate use, aye, abuse of mercurial preparations, carried often to salivation and destruction of the maxilla and adjacent structures? Why were patients bled so often and so freely? Why were so lavishly given the poisonous antimony, the deadly aconite, and other depressants generally? Why did they interdict the use of nutritious food and forbid the drinking of water in fevers, except in very limited quantities?

It must be remembered that for long years the profession had been taught and trained, often by personal preceptors, to venerate and obey the traditions of the fathers, accepting them without question or criticism. These traditions had taught that inflammation was the basic cause of all diseases, and hence the study of inflammation from its first inception in redness, heat and congestion to its final end in ulceration, gangrene, sphacelus, or more favorably in resolution, became an imperative requisite in the curriculum of all the colleges.

Again it was taught that inflammation was originated or caused by an excess of fibrin in the blood, and to reduce that excess was the way to strangulate inflammation. This reduction could be effected most quickly by blood-letting, since the first blood from venesection was heavily cupped, hence contained most fibrin. And then mercurial preparations were known to break down and destroy the fibrinous blood. Antimony and aconite had a similar effect.

But on the other hand, rich food with free use of water restocked the

blood with fibrin. Hence these must be denied.

If now we call to mind the well-known fact that at this period there prevailed an inflammatory cycle in disease, the above practice is readily accounted for on the well-assured principle, "*Contraria contrariis curantur*."

Of course in the light of the present day, and with our newer pathology and our improved armamentarium of remedies, such treatment would not be tolerated. Moreover, disease at the present day, instead of inflammatory, tends more toward a typhoid type, requiring supporting or stimulating treatment. We have also learned in the long years since that the more vigor we can develop in the sick and weakened body by food and stimulants the greater power it has to resist and overcome disease.

But why, and what has brought about the changes in medicine in the last half century?

The frequent and sad effects of calomel in destruction of the maxilla and disfigurement of the face, the horror felt by many at the sight of blood in venesection, not to mention the pain of the lance-thrust, the natural disgust at the bitter and offensive taste of the huge doses—often tablespoon doses—of such drugs as powdered peruvian bark, led many people to readily accept any fad that promised relief. Hence the quick and popular acceptance of homeopathy, hydropathy, eclecticism and the like.

Moreover, the more independent thinkers in the regular profession began to look about for other means of combating disease.

Dr. W. C. Norwood brought forward his saturated tincture of *veratrum viride*, claiming for it that it bled the patient into his own blood-vessels without waste of the vital fluid; that it was a reliable heart sedative and depressant, and absolutely safe if given prudently. Dr. H. C. Wood verified his claim, and whilst the regulars fought viciously against its use, yet it gradually supplanted the lancet and aconite.

Dr. Bartholow, then of Cincinnati, the hotbed of Eclecticism, noted the good effects of many of the vegetable extracts that the Eclectics had introduced, and had the courage to use and commend them. His influence brought forward podophyllin, aloin, leptandrin, and other agents, as useful substitutes for calomel in many diseases, and gradually we learned that one-tenth to one-half grain doses of calomel were often more serviceable than the former dose of ten grains, and infinitely less harmful.

Dr. Austin Flint, witnessing, while in New Orleans, the depressing and disastrous effects of long-continued heat, inveighed against the depressant treatment of disease then in vogue; adopted for himself, and strongly commended to others, a tonic-supporting and stimulating treatment. Other medical men tried it, and with such satisfactory results that often, since, it has been carried to extremes.

In the meanwhile the wholesale pharmacists set their forces to work to discover and extract the active principles of vegetable agents, and by sugar-coating pills and dissolving bitter extracts in palatable excipients, to meet the popular demand for pleasant-tasting medicines.

H. C. Wood, of Philadelphia, and a few other notable physiologists, engaged in the work of testing the physiological effects of the various agents of the *Materia Medica*, first upon animals, and then tentatively upon man, gradually eliminating the worthless and those of little value, and establishing in the confidence of the profession many new agents, both vegetable and mineral, often proven to possess powers hitherto unknown.

It thus came about that our *Materia Medica* is now being reduced to a physiological or scientific basis of acceptable and palatable medicines, upon which we can safely rely for effect.

If now, in addition to the above, we reflect upon the superiority we have gained in diagnosis by the discovery and use of the many instruments of precision now known (as the clinical thermometer, the hypodermic syringe, and the like), that were unheard of fifty years ago, we shall not be surprised at the fact that the death rate has been greatly lessened, and the average longevity greatly extended, and this, too, without reflection upon the labors of our predecessors in the profession, who were so handicapped with an uncertain and unreliable *Materia Medica*, and a lack of instruments of modern invention for diagnosis, or for administration of medicinal agents other than by mouth, and had never even heard of the germ theory of disease, nor of the serum antitoxic treatment.

In the light of these facts, it behooves the medical profession of the present day to honor themselves and those who have preceded us, by push-

ing forward the grand work of perfecting our *Materia Medica* and reducing it to a positive scientific basis.

We must eliminate all foreign, inert material, crude and worthless elements, abstract the very essence, separate and simplify the active principles, and thoroughly test them, so that full reliance can be placed on their strength and physiological effect. And then we must put them in pleasing and palatable form.

This done, we must not accept the *ipse dixit* of any man, however high his repute, as to any branch of medicine, till after full verification by careful experimentation.

Criticism in medicine is a Christian duty. When the life of a fellow-man is at stake, we dare not neglect any precaution to know that we are right. Precedent here is a good thing only after every possible test of its correctness.

In medical practice, as in war, the more concentrated and powerful the force, and the more directly applied to the object to be subdued, the better the result. Yet it must not be forgotten that there is danger in handling high explosives, unless skill and circumspection be combined in the engineer.

Once armed with powerful medicinal agents, in concentrated and palatable form; armed, also, with a critical knowledge of the precise effect of each agent; and, further, with a broad, yet accurate and precise, diagnosis of disease, verified by every possible instrument of precision; and, most important of all, by an educated appreciation of its exact pathology—then, and then only, can we say that

medicine is truly on a scientific basis.

Should this high standard ever be attained—and all our energies should be directed to this end—the world's plaudits will be justly ours.

KNOX COUNTY MEDICAL SOCIETY.

Dr. S. M. Brown, President.

Dr. H. J. Jurgens, Secretary.

The regular meeting of the Knox County Medical Society met on August 7, 1905, the president, Dr. Brown, in the chair. Six members present. The secretary being absent, Dr. St. John was appointed secretary pro. tem. Reading of the minutes was dispensed with.

Dr. Arnett, of Novelty, was invited to discourse upon the "Etiology of Typhoid Fever" as per program arranged at the previous meeting. Discussion by Dr. Northcutt brought out further items in regard to the communicability, but as this also came under Dr. Leeman's share in the program, on motion of Dr. G. Brown, Dr. Leeman took up the subject. His paper on "The Communicability of Typhoid Fever" was deeply interesting, especially with regard to the various infections and modes of entrance into the system. Dr. Northcutt responded to the portion on the program entitled "Symptomatology, Direct and Differential," this subject being well and ably handled, particularly respecting the more dangerous symptoms including the pulse, temperature and hemorrhages. Dr. Jurgens being absent, the paper on "Pathology and Bacteriology" had to be omitted much to the disappointment of the members. Dr. Geo.

Brown then gave a practical, pithy and cleverly outlined role for "Treatment by the Country Practitioner," this being his allotted portion on the program.

It is in this especial part of the symposium that any and all condensed, practical and well tried methods of treatment prove of deep interest and value to the members of any county medical society and should be encouraged to the utmost. This was manifested and deeply appreciated by our members during the very amicable and social discussion ensuing upon the various papers read.

The criticisms were all well received and cordially replied to, especially the mention of the oil of cinnamon and turpentine. Dr. St. John read a clipping from the *Journal of the A. M. A.* on the new methylene blue test as being cheaper and equally as reliable as the Ehrlich diazo test. The Woodbridge treatment was canvassed but met with poor consideration and was rather doubted as in any way more efficient. Quinine was also discussed as a tonic. Phenacetin, sulfonal and other drugs came in for discussion. The majority of the coal tar preparations were discouraged.

The president who has had an experience of thirty years in treating typhoid fever, praised the symposium in its entirety, thanking the participants cordially, and declared that the sentiments expressed met with his hearty approval. The prevailing idea in the treatment being as little medication internally as possible, sanitary disinfection, hygienic and dietary measures, to conduct the patient through as well as possible.

Dr. Myers and Dr. Jurgens arriving previous to the close of the session, took part in the discussion.

A motion was offered and seconded that the members present their papers, as read, in suitable form for preservation by the secretary and made a part of the records.

Moved and seconded by Dr. Arnett that the president and secretary appoint subjects and notify the various members who are expected to take part in the next meeting. Moved and seconded that a vote of thanks be accorded the members taking part in the symposium.

Moved by Dr. Jurgens and seconded that the outside members and ladies be invited to arrive in time and be dined by the local members at the next meeting.

H. J. JURGENS, Secy.

WAYNE COUNTY MEDICAL SOCIETY.

Dr. J. P. Sebastian, President.

Dr. R. J. Owen, Secretary.

The last meeting of the Wayne County Medical Society was held at Patterson on July 29th. Heavy rains in the county rendered the roads almost impassable and the attendance was therefore light.

The meeting was called to order by the president. Applications for membership were received from Drs. Jesse W. Hale, of Greenville, and C. H. Jones, of Brunot. These were accepted and their names enrolled.

There being no scientific program prepared, discussions in an informal way were entered into by the members on the following subjects: Puerperal convulsions, placenta previa, puerperal peritonitis, post-partum

hemorrhage, pelvic cellulitis with treatment of resulting abscess. Dr. S. A. Bates reported a case of intussusception in a baby which ended fatally.

A motion was made and carried expressing the thanks of the meeting to Dr. Sebastian and family for their hospitality.

The next meeting will be held at Mill Spring on September 29th.

R. J. OWENS, Secretary.

ST. CHARLES COUNTY MEDICAL SOCIETY.

Dr. J. R. Mudd, President.

Dr. B. Kurt Stumberg, Secretary.

The last meeting of the St. Charles County Medical Society was held at St. Charles, June 6th, Dr. J. R. Mudd presiding. Roll being called, the minutes of the previous meeting were read and adopted.

The secretary read the constitution and by-laws of the State Medical Association. These were altered in a few minor details and adopted by the St. Charles County Society.

The treasurer's report was read and accepted.

There being no papers nor interesting cases to report the society proceeded to the election of officers. A motion was made and seconded that the election be by acclamation. The motion carried.

The result of the election was as follows:

Dr. J. R. Mudd, president; Dr. F. P. Dunn, vice-president; Dr. B. Kurt Stumberg, secretary; Dr. Carl Bitter, treasurer; Dr. O. Morgner, censor; Dr. W. Hardy, censor; Dr. B. Wenther, censor.

A resolution was adopted to send

greetings from the society to Dr. C. M. Johnson. It was decided to pass the next regular July meeting and that the next meeting be held the first Tuesday in October.

An application from Dr. Corley was

received and referred to the censors.

There being no further business before the society, a motion for adjournment until October, was made and passed.

B. KURT STUMBERG, Secretary.

NEWS ITEMS.

Davies County Medical Society was unable to hold its regular quarterly meeting in July, on account of bad weather. The next meeting will be held in Gallatin, October 10th.

Cole County Medical Society was unable to transact any business at its last meeting on account of lack of quorum. A number of members were away from their homes, attending meetings and on vacation trips. The next meeting will be held on October 2d.

The Board of Health of St. Louis is considering the establishment of a dispensary at the City Hospital. A bill will be introduced in the municipal assembly providing for the dispensary.

Dr. Fred Watts, of Perry, was appointed to represent the Ralls County Medical Society on the scientific program for the next annual meeting.

Permission was recently asked of the board of councillors in a town in New York state, for the establishment of a sanatorium for tuberculosis. Statisticians were quoted to demonstrate that hospitals for the treatment of tuberculosis are not a menace to the public health. Despite the figures, when

the matter was put to a vote, there was only one affirmative ballot cast, and the enlightened citizen who cast the ballot was an undertaker.—*Medical Record*.

Dr. T. D. Crothers, of Hartford, Conn., superintendent of Walnut Lodge Hospital, has accepted an invitation to deliver the first oration in the Norman Kerr memorial lectureship at London, England, October 10, 1905. Dr. Kerr will be remembered as an eminent London physician, who made a special study of inebriety, alcoholism, and other drug disorders. He wrote several excellent books on this subject, and was instrumental in securing the enactment of laws for the control of inebriates, and the promotion of hospitals for their care throughout Great Britain. He founded the British Society for the Study of Inebriety, in 1884, and this society and his friends have organized a memorial lectureship, for yearly orations on his life and work. It is a very pleasant recognition of the progress of medical science in this country, that an American physician should be invited to deliver the first lecture.—From the *British Journal of Inebriety*.

The eighteenth annual meeting of the Medical Society of the Missouri

Valley was held in Council Bluffs, Iowa, on Thursday and Friday, August 24th and 25th, under the presidency of Dr. S. Grover Burnett, of Kansas City.

The Grand Hotel had been selected as headquarters, while the sessions were held in the Auditorium at Lake Manawa, a beautiful resort near the city. This afforded a cool and comfortable place to enjoy the scientific program, which was much appreciated. The evenings were devoted to the various forms of amusement found at this park. Following is a list of the papers:

"Discussion on Diabetes," led by Dr. LeRoy Crummer, Omaha.

"Discussion on Pulmonary Tuberculosis," led by Dr. J. W. Kime, Fort Dodge, Iowa.

"Carelessness in the Use of the Curette," Herman E. Pearse, Kansas City.

"Treatment of Patients After Intra-Abdominal Operations," Daniel Morton, St. Joseph.

"Practical Facts About Hernia," L. A. Todd, St. Joseph.

"Four Cases of Essential Anemia, and Their Differentiation," W. O. Bridges, Omaha.

"Some Observations on Carcinoma of the Large Intestine," A. P. Condon, Omaha.

"Clinical Importance of the Diplo-Bacillus of Morax-Oxenfeld," Harold Gifford, Omaha.

"The Prevention of Deformity," J. P. Lord, Omaha.

"Bodily Weight as a Factor in Prognosis in Nervous and Mental Disease," Frank Parsons Norbury, Jacksonville, Ill.

"Some Non-Septic Causes of Fever After Labor," Mary Strong, Omaha.

"The Pharmacology of Antipyretics," A. L. Muirhead, Omaha.

"Ectopic Gestation, with Report of Cases," O. Beverly Campbell, St. Joseph.

Paper, W. O. Henry, Omaha.

A cordial invitation is extended to the profession.

Dr. Chas. Wood Fassett, St. Joseph, is secretary.

At a recent meeting of the board of directors of St. Luke's Hospital, the following medical staff was elected: Drs. Harvey G. Mudd (chief of staff), G. Baumgarten, Walter Baumgarten, E. C. Burnett, M. B. Clopton, A. E. Ewing, W. E. Fischel, F. R. Fry, George Gellhorn, Joseph Grindon, Willis Hall, M. H. Post, J. B. Shapleigh, Greenfield Sluder, A. E. Tausig, Geo. M. Tuttle, Jules F. Valle, P. G. Robinson, L. P. Butler, J. Campbell Smith, W. A. Shoemaker, W. G. Moore, W. B. Outtem, Leon Straus, Roland Hill, V. P. Blair, J. Young Brown, Nathaniel Allison, J. W. Charles and B. W. Moore.

Plans are being prepared for a new hospital, to be added to the various Bethesda institutions in St. Louis. The institutions now operating under the Bethesda auspices are the Hospital and Home for Incurables, the Old Ladies' Home, the Home for Foundlings, and the Maternity Home. The new building will be devoted to the Maternity Home, the quarters now occupied by this branch being inadequate, and not up to the requirements for modern treatment.

COUNTY SOCIETIES IN AFFILIATION WITH THE STATE MEDICAL ASSOCIATION.

County.	President.	Address of President.	Secretary.	Address of Secretary.
Adair	James Hanks	Brashear	E. C. Grim	Kirksville.
Andrew	D. B. Bryant	Savannah	C. O. Jeffries	Savannah.
Atchison	G. W. Lott	Ulesboro	A. McMichael	Rockport.
Audrain	C. A. Rothwell	Mexico	E. S. Cave	Mexico.
Barton	G. D. Allee	Lamar	J. L. McComb	Kahoka.
Bates	A. E. Lyle	Butler	E. N. Chastain	Rich Hill.
Benton	G. S. Gresson	Lincoln	O. Davis	Warsaw.
Boone	P. I. Thornton	Columbia	W. A. Norris	Columbia.
Buchanan	P. I. Leonard	St. Joseph	Chas W Fassett	St. Joseph.
Butler	W. A. Kendall	Poplar Bluff	J. J. Norwine	Poplar Bluff.
Caldwell	C. C. Leeper	Braymer	Tinsley Brown	Hamilton.
Callaway	J. F. Harrison	Fulton	Martin Yates	Fulton.
Camden	G. M. Moore	Linn Creek	G. T. Myers	Macks Creek.
Cape Girardeau	H. L. Cunningham	Cape Girardeau	E. P. Potterfield	Cape Girardeau.
Carroll	W. C. Baird	Bogard	R. F. Cook	Carrollton.
Carter-Shannon	F. Hyde	Eminence	J. A. Chilton	Van Buren.
Cass	R. D. Ramey	Garden City	J. S. Triplett	Harrisonville.
Chariton	H. C. Tatum	Brunswick	C. A. Jennings	Salisbury.
Clark	H. W. Harris	Winchester	A. C. Bridges	Kahoka.
Clay	L. J. Jones	Linden	E. H. Mathews	Liberty.
Clinton	A. H. Sturgis	Perrin	E. A. Colley	Platte City.
Cole	J. P. North	Jefferson City	G. Bttmueller	Jefferson City.
Cooper	P. L. Hurt	Boonville	R. S. Holman	Boonville.
Crawford	W. A. Metcalf	Steelville	A. H. Horn	Steelville.
Davies	J. D. Dunham	Pattonsburg	M. A. Smith	Gallatin.
Dunklin	N. F. Kelley	Kennett	G. L. Johnson	Kennett.
Franklin	H. A. Booth	Pacific	A. C. Brown	Moselle.
Gasconade-Maries-Osage	J. J. Ferrell	Owensville	J. W. Nieweg	Lois.
Greene	W. P. Patterson	Springfield	Robt. M. Cowan	Springfield.
Grundy	J. A. Asher	Trenton	W. D. Fulkerson	Trenton.
Henry	Jno. H. Britts	Clinton	F. M. Douglas	Clinton.
Holt	B. T. Quigley	Maund City	J. F. Chandler	Forest City.
Howard	A. W. Moore	Fayette	C. W. Watts	Fayette.
Howell	W. V. Bingham	Pottersville	H. C. Shutter	West Plains.
Iron	R. W. Gay	Ironton	Ira A. Marshall	Ironton.
Jackson	Robt. T. Sloan	Kansas City	Max Goldman	Kansas City.
Jasper	A. B. Freeman	Joplin	J. T. Stamey	Joplin.
Jefferson	W. H. Farrar	DeSoto	H. Will Elder	DeSoto.
Johnson	M. P. Shy	Knobnoster	E. H. Gilbert	Warrensburg.
Knox	S. S. Brown	Edina	Henry J. Jurgen	Edina.
Laclede	J. M. Billings	Lebanon	J. A. McComb	Lebanon.
Lafayette	P. S. Fulkerson	Lexington	C. T. Ryland	Lexington.
Lincoln	S. R. McKay	Troy	Wm. P. Smith	Troy.
Linn	K. V. Stanley	Brookfield	D. F. Howard	Brookfield.
Livingston	David Gordon	Chillicothe	J. F. Cherrington	Chillicothe.
McDonald	E. F. Dotson	Anderson	M. L. Sellers	Anderson.
Macon	E. S. Smith	Macon	G. B. Rush	Macon.
Madison	G. W. Greenwood	Fredericktown	C. U. Davis	Fredericktown.
Marion	R. H. Goodler	Hannibal	F. Janet Reid	Hannibal.
Mercer	H. P. Chesmore	Princeton	C. R. Buren	Princeton.
Miller	S. P. Hickman	Ulman	G. D. Walker	Eldon.
Mississippi	A. J. Martin	East Prairie	W. P. Howle	Charleston.
Moniteau	J. B. Stewart	Clarksburg	W. R. Patterson	Tipton.
Monroe	S. M. Brown	Monroe City	M. C. McMurry	Paris.
Montgomery	J. L. Jones	Jonesburg	W. M. Wheeler	High Hill.
Morgan	W. L. Hatler	Barnett	J. T. Beale	Versailles.
Newton	J. W. Lamson	Neosho	Horace Bowers	Neosho.
Nodaway	J. A. Larrabee	Barnard	F. R. Anthony	Maryville.
Pemiscot	D. B. Crowe	Caruthersville	G. M. Luten	Caruthersville.
Perry	T. M. Hudson	Perryville	F. M. Vessells	Perryville.
Pettis	W. C. Overstreet	Sedalia	W. J. Ferguson	Sedalia.
Phelps	W. H. Breuer	St. James	L. B. Baysinger	Rolla.
Pike	M. O. Biggs	Bowling Green	T. Guy Hetherlin	Louisiana.
Platte	R. P. Davis	Woodruff	G. C. Coffey	Platte City.
Pulaski	W. L. Ragan	Richland	G. W. Quick	Crocker.
Putnam	C. H. Carryer	Hartford	A. Townsend	Unionville.
Ralls	O. B. Hicklin	New London	T. J. Downing	New London.
Randolph	G. O. Cuppaledge	Moberly	W. M. Dickinson	Renick.
Ray	Chas. B. Shotwell	Richmond	L. D. Greene	Richmond.
Reynolds	J. M. Lowery	Centerville	T. W. Chilton	Corridon.
Saline	D. C. Gore	Marshall	D. F. Bell	Marshall.
St. Charles	J. R. Mudd	St. Charles	A. Gossow	St. Charles.
St. Clair	W. Cline	Appleton City	E. D. Miles	Oscola.
Ste. Genevieve	M. Andre	St. Genevieve	F. E. Hinch	St. Genevieve.
St. Louis	F. L. Henderson	Century Bldg.	T. A. Hopkins	Century Building.
St. Louis Co.	H. G. Wyer	Kirkwood	H. T. Randle	Clayton.
Schuyler	J. T. Jones	Queen City	H. E. Gerwig	Downing.
Scotland	W. E. Alexander	Memphis	O. F. Pile	Memphis.
Shelby	H. C. Vaughn	Shelbina	A. M. Wood	Lentner.
Stoddard	D. R. Corbin	Bloomfield	Jno. Ashley	Bloomfield.
Sullivan	J. C. Kessenger	Millan	J. S. Montgomery	Millan.
Vernon	H. C. Jarvis	Schell City	T. B. Todd	Richards.
Warren	W. J. Alexander	Marthasville	E. A. Flusmeyer	Wright City.
Washington	J. A. Eaton	Belgrade	W. S. Smith	Belgrade.
Wayne	L. M. Pettit	Greenville	I. N. Barnett	Piedmont.

MEETINGS OF COUNTY MEDICAL SOCIETIES.

County.	Date of Meeting.
Adair	Quarterly. Last Tuesday, Jan., April, July, Oct.
Andrew	Monthly. First Wednesday.
Atchison	Quarterly. January, April, July, October.
Audrain	Monthly. First Monday.
Barton	Quarterly. First Thursday, May, Aug., Nov., Feb.
Bates	Quarterly. Last Thursday in Feb., May, Aug. and Nov.
Boone	Monthly. First Monday.
Buchanan	Semi-Monthly. First and Third Saturday.
Butler	Weekly. Fridays.
Callaway	Quarterly. July, October, January, April.
Camden	Monthly. Second Thursday.
Cape Girardeau	Quarterly. Second Monday, April, July, Oct. and Jan.
Carroll	Monthly. Second Wednesday.
Carter-Shannon	Quarterly. February, May, August, and November.
Cass	Quarterly. First Thursday of March, June, Sept. and Dec.
Chariton	Monthly. Last Thursday.
Clark	Bi-Monthly. First Mondays, Feb., April, June, Aug., Oct., Dec.
Clay	Monthly. Last Monday.
Clinton	Monthly.
Cole	Quarterly. Second Thursday of Jan., April, July, Oct.
Cooper	Monthly. First Tuesday.
Crawford	Quarterly. First Tuesday, April, July, October, January.
Davies	Quarterly. January, April, July, October.
Dunklin	Monthly. First Tuesday.
Franklin	Monthly. First Tuesday.
Gasconade-Marles-Osage	Monthly.
Greene	Weekly. Saturday.
Grundy	Quarterly. July, October, January, April.
Henry	Monthly. Second Tuesday.
Holt	Quarterly. January, April, July, October.
Howard	Monthly. Third Tuesday.
Howell	Bi-Monthly. First Thursday of Dec., Feb., April, June, Aug., Oct.
Iron	Monthly. First Saturday.
Jackson	Semi-Monthly. Second and Fourth Thursdays.
Jasper	Semi-Monthly. First and Third Mondays.
Jefferson	Monthly. Fourth Tuesday.
Johnson	Quarterly. June, September, December, March.
Knox	Monthly. First Monday.
Laclede	Semi-Annually. First Mondays May and November.
Lafayette	Monthly. Second Tuesday, Jan., Mch., May, July, Sept., Nov.
Lincoln	Quarterly. May, August, November, February.
Linn	Quarterly. October, January, April, July.
Livingston	Monthly. Third Wednesday.
McDonald	Monthly. First Wednesday.
Macon	Monthly. On or before full moon, Tuesday, 10 a. m.
Madison	Semi-Monthly. First and Third Monday.
Marion	Monthly. First Friday.
Mercer	Monthly. Second Thursday.
Miller	Quarterly. First Thursday, March, June, Sept. Dec.
Mississippi	Monthly. First Monday.
Moniteau	Quarterly. March, June, September, December.
Monroe	Quarterly. First Tuesday of April, July, October, January.
Montgomery	Monthly.
Morgan	Quarterly. First Wednesday of March, June, Sept., Dec.
Newton	Monthly. Second Tuesday.
Nodaway	Monthly. Second Tuesday.
Pemiscot	Quarterly. First Tuesday, January, April, July, November.
Perry	Monthly. First Wednesday.
Pettis	Semi-Monthly. First and Third Monday.
Phelps	Quarterly. March, June, September, December.
Pike	Monthly.
Platte	Monthly. First Wednesday.
Pulaski	Monthly.
Putnam	Monthly. First Wednesday.
Ralls	Quarterly. January, April, July and October.
Randolph	Monthly. Second Tuesday.
Ray	Monthly. Third Wednesday.
Reynolds	Quarterly. January, March, June, October.
Saline	Monthly. Second Tuesday.
St. Charles	Monthly.
St. Clair	Quarterly. Second Tuesday, March, June, Sept., Dec.
St. Genevieve	Monthly. Second Wednesday.
St. Louis	Weekly. Saturdays.
St. Louis County	Monthly. Second Wednesday.
Schuyler	Semi-Annually. July and December.
Scotland	Monthly. Second Tuesday.
Shelby	Quarterly. June, September, December, March.
Stoddard	Quarterly. First Wednesday, March, June, Sept., Dec.
Sullivan	Monthly.
Vernon	Quarterly. First Tuesday, March, June, Sept. and Dec.
Warren	Monthly.
Washington	Monthly. First Saturday.
Wayne	Monthly.

AMERICAN MEDICAL ASSOCIATION.

Next Annual Meeting at Boston, Mass.

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MISSOURI STATE MEDICAL ASSOCIATION.

Next Annual Meeting, Jefferson City, May, 1906.

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COUNCILLOR DISTRICTS AND LIST OF COUNTIES IN EACH DISTRICT.*

First District.—F. B. Hiller, Kahoka. Counties: Clark, Scotland, Schuyler, Adair, Knox, Lewis.

Second District.—J. D. Brummall, Salisbury. Counties: Linn, Carroll, Chariton, Livingston, Grundy, Sullivan, Mercer, Putnam.

Third District.—E. H. Miller, Fayetteville. Counties: Clay, Ray, Platte, Clinton, Caldwell, DeKalb, Gentry, Harrison, Worth, Daviess.

Fourth District.—C. H. Wallace, St. Joseph. Counties: Buchanan, Holt, Atchison, Nodaway, Andrew.

Fifth District.—L. W. Dallas, Hunnewell. Counties: Macon, Shelby, Marion, Randolph, Monroe, Ralls.

Sixth District.—Woodson Moss, Columbia. Counties: Audrain, Callaway, Montgomery, Warren, Pike, Boone, Howard, St. Charles.

Seventh District.—W. B. Dorsett, St. Louis. Counties: St. Louis, Lincoln.

Eighth District.—F. J. Lutz, St. Louis. Counties: Franklin.

Ninth District.—B. M. Hypes, St. Louis. Counties: Jefferson, Washington, St. Francois, Reynolds, Iron, Perry, St. Genevieve.

Tenth District.—J. J. Norwine, Poplar Bluff. Counties: Mississippi, New Madrid, Wayne, Stoddard, Dunklin, Butler, Ripley, Carter, Pemiscot.

Eleventh District.—W. D. Porterfield, Jr., Cape Girardeau. Counties: Bollinger, Scott, Madison, Cape Girardeau.

Twelfth District.—W. S. Allee, Olean. Counties: Miller, Morgan, Maries, Cole, Moniteau, Camden, Osage, Gasconade.

Thirteenth District.—R. D. Haire, Clinton. Counties: Pettis, Lafayette, Henry, St. Clair, Benton, Saline, Hickory, Cooper.

Fourteenth District.—M. P. Overholser, Harrisonville. Counties: Jackson, Cass, Bates, Johnson.

Fifteenth District.—A. R. Snyder, Joplin. Counties: McDonald, Newton, Jasper, Dade, Barton, Cedar, Vernon.

Sixteenth District.—R. L. Johnson, Rolla. Counties: Dallas, Crawford, Phelps, Pulaski, Laclede, Dent.

Seventeenth District.—J. E. Tefft, Springfield. Counties: Greene, Christian, Stone, Barry, Lawrence, Webster, Polk, Taney.

Eighteenth District.—H. C. Shuttee, West Plains. Counties: Ozark, Oregon, Howell, Texas, Wright, Shannon, Douglas.

*Counties in black type are unorganized.